Software User's Manual (SUM)

TADIL-A/B Interface

Version 3.0.5.1

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Table of Contents

TADIL-A/B Introduction

The TADIL-A/B software is bundled as one software segment and multiple data segments. The *TADIL-A/B Interface* software segment contains all TADIL-A/B executables and Chart menu items, but only the passive (receive-only) implementation table. The *TADIL-A/B Table* data segments contain an active (two-way) table for one of the following transmit-capable implementations: U.S. Coast Guard, U.S. Marine Corps, Submarine, and TSC/MOCC. Until one of the data segments is installed, only passive channels can be run.

The TADIL-A/B software adds the following to the DII COE system:

- *TADIL-A-PEDO* - Passive EDO serial interface
- *TADIL-A-PIH* - Passive Indian Head serial interface
- *TADIL-AB* - TADIL-A/B interface
- *MX512P* - Serial interface to control the MX-512P/AN/USQ-125 data terminal set
- *POFA* – Program that perform Programmed Operational Functional Appraisal
- *NTDSDIAG* - NTDS diagnostics program

The TADIL-A-PEDO and TADIL-A-PIH interfaces tap into existing Tactical Data Systems (TDS), receiving all data transmitted and received by the TDS to the DII COE track management system without affecting the TDS. These serial channels receive and display all track types defined in the M-Series specification MIL-STD-6011. The operator can view detailed attributes of all received tracks. These tracks can be converted to the OTH-Gold-type message standard for transmission to other non-TDS systems. Tracks can be filtered by category.

The TADIL-AB interface provides a two-way transmit and receive capability for TADIL-A and TADIL-B.

TADIL-A is a half-duplex, netted, digital data link used to exchange tactical information among Participating Units (PU). Messages are exchanged on the TADIL-A network using M-series messages as defined in the Tactical Digital Information Link (TADIL) A/B Message Standard, MIL-STD-6011

Running TADIL-A, the DII COE machine serves as a TDS. It interfaces to the

Data Terminal Set (DTS) through an NTDS parallel connection. The DTS controls the TADIL-A communications link and issues commands to the TDS to Prepare to Receive (PTR) and Prepare to Transmit (PTT) in accordance with the Interoperability and Performance Standards for Tactical Digital Information Link (TADIL) A, MIL-STD-188-203-1A.

TADIL-B is a full-duplex, serial, point-to-point link in accordance with the Subsystem Design and Engineering Standards for Tactical Digital Information Link (TADIL) B, MIL-STD-188-212. It uses M-series messages for the exchange of tactical information among Reporting Units (RU) as defined in MIL-STD-6011. The TADIL-B segment supports data rates of 1200 and 2400 baud, and up to 8 connections simultaneously.

The *TADIL-A/B Interface* software segment provides complete control of the Link. The operator can:

- add tracks
- view detailed attributes of received tracks
- perform identification conflict resolution
- establish gridlock position
- send and read plain text messages
- monitor link performance
- send and read command messages and engagement messages
- set own unit's weapon status and read other units' weapon status
- set and read TADIL alerts (i.e. emergency or force-tell status)
- forward reports and messages between TADIL-A and/or TADIL-B connections
- request updates of data from other units that are participating in the network
- send current DLRP position and accept new DLRP positions from other units on the net
- receive and display ASW Summary reports.

The MX512P interface allows the operator to control the data terminal set from the DII COE system console. This program connects to the MX-512P/AN/USQ-125 TADIL-A data terminal set through a serial interface. The

graphical user interface displayed on the console allows the operator to control all features of the data terminal set, including TADIL-A own unit setup, network setup, start and stop polling, and link monitoring.

POFA is a diagnostic program used to validate and debug two-way TADIL-A installations. Using this channel, the operator can exercise the entire TADIL-A hardware suite, from the radio through the DTS, the cryptographic unit, and the TDS (DII COE system). It can help diagnose problems in installation and periodic maintenance.

The NTDSDIAG interface allows the operator to run loop-back and other tests to verify that the TDS NTDS board, cables and driver are properly installed.

Both active and passive communications are described in this manual. There are minor differences between Link-11 and TADIL-A systems. Although some of the windows and options are named “Link-11,” this manual will refer to the system as “TADIL-A” throughout the document.

The document is organized into the following sections:

Installing TADIL-A/B software.

Setting up a Channel.

Description of a typical track window and definitions of all fields.

An alphabetical list of options on the TADIL-A/B menu.

Programmed Operational Functional Appraisal (POFA)

Installing TADIL-A/B

Install the TADIL-A/B software using the Segment Installer option in the System Administration SOFTWARE pull-down menu.

Software Requirements

The following needs to be installed prior to installing the TADIL-A/B software:

- Appropriate Operating System
- DII COE Kernel
- Appropriate DII COE Account Group

The following Solaris drivers are required by the TADIL-AB, NTDSDIAG and POFA interfaces:

- Solaris 2.5.1 NTDS S-Bus Driver, Version 4.1b, GET Engineering
- Solaris 2.5.1 NTDS TADIL-B S-Bus Driver, Version 1.10, RSI Engineering

The following HP-UX drivers are required by the TADIL-AB, NTDSDIAG and POFA channels:

- HP-UX 10.20 NTDS EISA-Bus Driver, Version 3.4d, GET Engineering

Hardware Requirements

The passive channels (TADIL-A-PEDO and TADIL-A-PIH) are supported on both TAC and SPARC workstations. They require the following hardware:

- Serial connection to the EDO, IH or SAIC Passive Link Tap

The NTDS channels (TADIL-AB, POFA and NTDSDIAG) run on both TAC and SPARC workstations. They require the following hardware:

- GET 10073502 NTDS EISA-Bus Interface Adapter
- GET 10048301 NTDS S-Bus Interface Adapter
- RSI S-Bus TADIL-B/Link-1 Card
- MX-512P/AN/USQ-125 Data Terminal Set

Setting up a TADIL-A/B Communications Channel

The general configuration procedure is the same for all the channels in the TADIL-A/B segment. However, the channel edit windows differ between interfaces as described in *Edit a Channel*. This section describes the general procedures. Refer to *Setting Up Specific Channels* for directions on setting up a specific channel.

There are three steps to setting up and starting a channel:

1. Add channel using the COMMUNICATIONS window, if needed (described in *Add a Channel*).

2. Edit the channel (described in *Edit a Channel*).

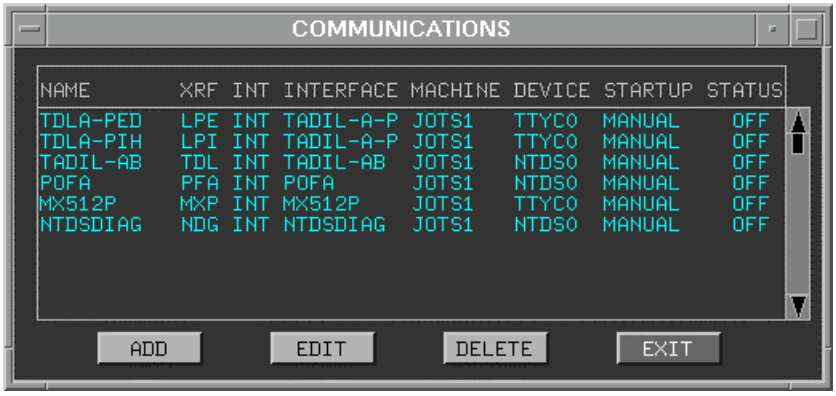
3. Start the channel (described in *Starting Specific Channels*).

All of these steps use options from the COMMUNICATIONS window as described in the *Software User's Manual, Unified Build (TMS/UCP).* A summary of the procedure for adding and editing channels is contained in the following sections.

The COMMUNICATIONS window displays a list of communications channels available in the system.

- A channel and interface may need to be added to this list and turned on after the segment is loaded.
- The COMMUNICATIONS window may contain a maximum of 32 channels. An existing channel may need to be deleted before adding the channel.

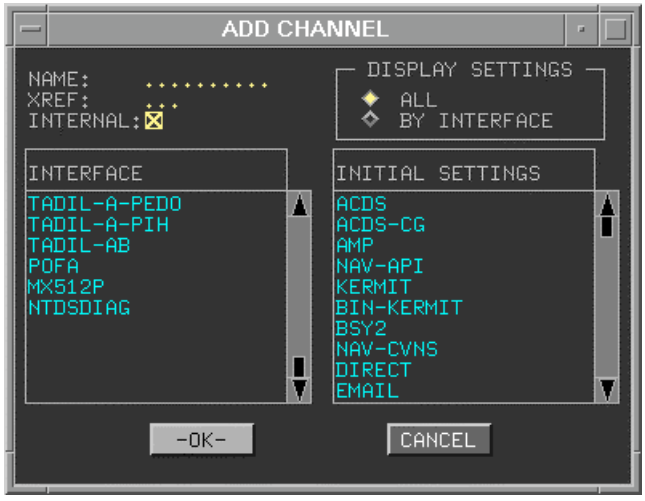
To access this window: COMMS pull-down menu **:** COMMUNICATIONS option.



Add a Channel

Click ADD to open the ADD CHANNEL window.

- The ADD CHANNEL window contains a list of all the communications interfaces in the system and a scroll list of the default channels (Initial Settings). Both lists are compiled in alphabetical order.
- Each new channel must use one of the system-provided interfaces.
- The same type of interface can be used by multiple channels.



> To create a new channel, use one of the following methods:

Select an Interface

1. Enter a NAME for the channel (up to 10 characters).
2. Enter a unique three-character cross-reference code (XREF).

3. Toggle the INTERNAL checkbox ON.

4. Select a communications interface.

5. To print a list of the interfaces, use the HARD COPY pop-up option.

6. Click OK to accept the new channel (name and interface), or click CANCEL to discard it.

Select a Channel

1. Double-click a channel name in the INITIAL SETTINGS scroll list.

2. The corresponding interface is automatically highlighted. The NAME and XREF fields are filled in.

3. Use the DISPLAY SETTINGS radio buttons to list channel defaults:

   - ALL—lists all the default channels for all interfaces.
   - BY INTERFACE—lists only those defaults that pertain to the selected interface. Click BY INTERFACE to see an initial setting called DEFAULT; values for default settings are the default values of the interface.

4. Click OK. The system checks for errors and duplicates; if any are found, a warning window appears.

Edit a Channel

The edit windows for the TADIL-A/B channels are described in this section. Highlight a channel in the COMMUNICATIONS window (described in *Add a Channel*) and click EDIT to open the EDIT window for that channel.

Edit TADIL-A-PEDO

To view and edit TADIL-A-PEDO channel settings, highlight the channel in the COMMUNICATIONS window and click EDIT.

> How to use the EDIT TADIL-A-PEDO window:

1. When the window first opens, data for the channel appears in the fields.
2. Modify the data.
   - Data fields (for example, NAME): Cannot be edited.
   - List fields (e.g., DEVICE): Click the right trackball button on the name of the device (for example, TTYC0) to show a list of available choices. Select a value from the list.
   - Checkboxes (for example, AUTOSTART): Toggle ON or OFF.
   - Radio buttons (for example, SOURCE): Toggle ON one in the group.
3. Click APPLY to accept the changes, or CANCEL to discard them. Note that if APPLY is clicked while the channel is turned on, the channel is automatically stopped and restarted with the new settings.

EDIT TADIL-A-PEDO Window Fields

CHANNEL Box

NAME

Channel name. This field cannot be edited.

INTERFACE

Communications interface for the channel. This field cannot be edited.

DEVICE

Name of the serial port used by this channel.

MACHINE

Name of the machine selected to run this channel.

AUTOSTART

Designates whether this channel is turned on automatically at system startup.

SOURCE Box

Designates Link source: LINK A, LINK B, LINK C, or LINK D.

DEFAULT TRACK TYPE Box

REAL WORLD

Exist in the real world.

LIVE TRAINING

Exists in the real world, but used for exercise purposes. May be assigned a different identity, such as a friendly track being identified as hostile.

SIMULATED

Does not exist in the real world; being created for exercise and scenario purposes only.

POSITIONING Box

Designates the method for calculating latitude/longitude positions for plotting TADIL-A tracks. COSINE CORRECTION is used most often. STEREOGRAPHIC is used to display a tactical picture that is consistent with the Air Defense Systems Integrator (ADSI) system.

EXTENDED RANGE

This field should be toggled on only when this channel is connected to a SAIC Passive Tap system configured to send extended range tracks (tracks that are beyond the standard 512 miles).

LINK CONTROL Box

AMP REQUIRED

Designates whether all reports are accepted into the local database, or only those with amplified data. Toggling this field is ON helps filter out erroneous tracks.

Edit TADIL-A-PIH

To view and edit TADIL-A-PIH channel settings, highlight the channel in the COMMUNICATIONS window and click EDIT.

> How to use the EDIT TADIL-A-PIH window:

1. When the window first opens, data for the channel appears in the fields.
2. Modify the data.
   - Data fields (for example, NAME): Cannot be edited.
   - List fields (e.g., DEVICE): Click the right trackball button on the name of the device (for example, TTYC0) to show a list of available choices. Select a value from the list.
   - Checkboxes (for example, AUTOSTART): Toggle ON or OFF.

- Radio buttons (for example, SOURCE): Toggle ON one in the group.

3. Click APPLY to accept the changes, or CANCEL to discard them. Note that if APPLY is clicked while the channel is turned on, the channel is automatically stopped and restarted with the new settings.

EDIT TADIL-A-PIH Window Fields

CHANNEL Box

NAME

Channel name. This field cannot be edited.

INTERFACE

Communications interface for the channel. This field cannot be edited.

DEVICE

Name of the serial port used by this channel.

MACHINE

Name of the machine selected to run this channel.

AUTOSTART

Designates whether this channel is turned on automatically at system startup.

SOURCE Box

Designates Link source: LINK A, LINK B, LINK C, or LINK D.

DEFAULT TRACK TYPE Box

REAL WORLD

Exist in the real world.

LIVE TRAINING

Exists in the real world, but used for exercise purposes. May be assigned a different identity, such as a friendly track being identified as hostile.

SIMULATED

Does not exist in the real world; being created for exercise and scenario purposes only.

POSITIONING Box

Designates the method for calculating latitude/longitude positions for plotting TADIL-A tracks. COSINE CORRECTION is used most often. STEREOGRAPHIC is used to display a tactical picture that is consistent with

the Air Defense Systems Integrator (ADSI) system.

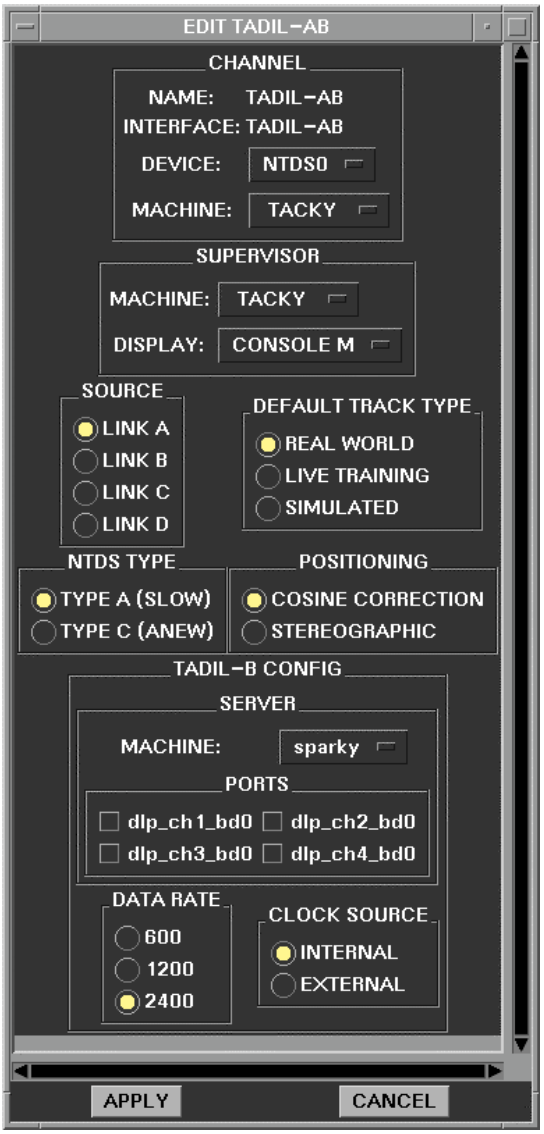
LINK CONTROL Box

AMP REQUIRED

Designates whether all reports are accepted into the local database, or only those with amplified data. Toggling this field is ON helps filter out erroneous tracks.

Edit TADIL-AB

To view and edit TADIL-AB channel settings, highlight the channel in the COMMUNICATIONS window and click EDIT.



> How to use the EDIT TADIL-AB window:

1. When the window first opens, data for the channel appears in the fields.
2. Modify the data.
   - Data fields (for example, NAME): Cannot be edited.
   - List fields (e.g., DEVICE): Click the right trackball button on the name of the device (for example, NTDS0) to show a list of available choices. Select a value from the list.
   - Checkboxes (for example, PORTS): Toggle ON or OFF.
   - Radio buttons (for example, SOURCE): Toggle ON one in the group.
3. Click APPLY to accept the changes, or CANCEL to discard them. Note that if APPLY is clicked while the channel is turned on, the channel is automatically stopped and restarted with the new settings.

EDIT TADIL-AB Window Fields:

CHANNEL Box

NAME

Name of the channel. This field cannot be edited.

INTERFACE

Communications interface for the channel. This field cannot be edited.

DEVICE

Name of NTDS device used by this channel.

MACHINE

Name of the machine selected to run this channel. The selected machine must be installed with the NTDS device as specified by DEVICE.

SUPERVISOR Box

Designates the MACHINE/DISPLAY to be used for Link Supervisor functions. Only one machine can be designated as the Link Supervisor. The Link Supervisor can do the following:

- define track block assignments
- define weapon status
- define Link configuration
- receive alerts

SOURCE Box

Designates Link source: LINK A, LINK B, LINK C, or LINK D.

DEFAULT TRACK TYPE Box

REAL WORLD
Exists in the real world.

LIVE TRAINING
Exists in the real world, but used for exercise purposes and may be assigned a different identity, such as a friendly track being identified as hostile.

SIMULATED
Does not exist in the real world; being created for exercise and scenario purposes.

NTDS TYPE Box

Designates type of NTDS: TYPE B (SLOW) or TYPE C (ANEW).

POSITIONING Box

Designates the method for calculating latitude/longitude positions for plotting TADIL-A tracks. COSINE CORRECTION is used most often. STEREOGRAPHIC is used to display a tactical picture that is consistent with the Air Defense Systems Integrator (ADSI) system.

TADIL-B CONFIG Box (Optional)

This box appears in the EDIT window only for TADIL-B-capable implementations (such as, U.S. Marine Corps), and only then if the DII COE system has the appropriate TADIL-B hardware.

MACHINE
Designates the name of the machine controlling the TADIL-B communications. The selected machine must be properly configured with the appropriate TADIL-B hardware.

PORTS
Designates the ports on the TADIL-B device to be exercised. Note that the number of selections depends on the number of ports available on the TADIL-B hardware.

DATA RATE
Designates the baud rate used by the TADIL-B interface.

CLOCK SOURCE
Internal or external clock source for TADIL-B port.

Edit POFA

To view and edit POFA channel settings, highlight the channel in the COMMUNICATIONS window and click EDIT.

> How to use the POFA window:

1. When the window first opens, data for the channel appears in the fields.
2. Modify the data.
   - Data fields (for example, NAME): Cannot be edited.
   - List fields (e.g., DEVICE): Click the right trackball button on the name of the device (for example, NTDS0) to show a list of available choices. Select a value from the list.
   - Checkboxes (for example, PORTS): Toggle ON or OFF.
   - Radio buttons (for example, SOURCE): Toggle ON one in the group.

3. Click APPLY to accept the changes, or CANCEL to discard them. Note that if APPLY is clicked while the channel is turned on, the channel is automatically stopped and restarted with the new settings.

EDIT POFA Window Fields:

CHANNEL Box

NAME

Name of the channel. This field cannot be edited.

INTERFACE

Communications interface for the channel. This field cannot be edited.

DEVICE

Name of NTDS device used by this channel.

MACHINE

Name of the machine selected to run this channel. The selected machine must be installed with the NTDS device as specified by DEVICE.

NTDS TYPE Box

Designates type of NTDS: TYPE B (SLOW) or TYPE C (ANEW).

EXTRA BIT PATTERN Box

Designates if an extra bit test pattern is to be used within the 130-word status block when in multi-station mode.

Edit MX512P

To view and edit MX512P channel settings, highlight the channel in the COMMUNICATIONS window and click EDIT.

> How to use the MX512P EDIT window:

1. When the window first opens, data for the channel appears in the fields.

2. Modify the data.

   - Data fields (e.g., NAME): Cannot be edited.

   - List fields (e.g., DEVICE): Click the right trackball button on the name of the device to show a list of available choices. Select a value from the list.

3. Click APPLY to accept the changes, or CANCEL to discard them. Note that if APPLY is clicked while the channel is turned on, the channel is automatically stopped and restarted with the new settings.

EDIT MX512P Window Fields

CHANNEL Box

NAME
Unique channel name. This field cannot be edited.

INTERFACE
Communications interface for the channel. This field cannot be edited.

DEVICE
Name of the serial port used by this channel.

MACHINE
Name of the machine selected to run this channel.

DISPLAY HEAD Box

Designates the MACHINE and DISPLAY where the Data Terminal Set Control Head window is displayed.

Edit NTDSDIAG

To view and edit NTDSDIAG channel settings, highlight the channel in the COMMUNICATIONS window and click EDIT.

> How to use the NTDSDIAG EDIT window:

1. When the window first opens, data for the channel appears in the fields.
2. Modify the data.
   - Data fields (e.g., NAME): Cannot be edited.
   - List fields (e.g., DEVICE): Click the right trackball button on the name of the device to show a list of available choices. Select a value from the list.
3. Click APPLY to accept the changes, or CANCEL to discard them. Note that if APPLY is clicked while the channel is turned on, the channel is automatically stopped and restarted with the new settings.

EDIT NTDSDIAG Window Fields

CHANNEL Box

NAME
Unique channel name. This field cannot be edited.

INTERFACE
Communications interface for the channel. This field cannot be edited.

DEVICE
Name of NTDS device.

MACHINE
Name of the machine used to transmit or receive messages on this channel.

Notes

Starting Specific Channels

This section describes steps to set up specific types of channels. See the previous section for detailed descriptions of the windows and fields.

Starting TADIL-A-PEDO

> This channel can be used to interface to an EDO TDP II passive tap system or a SAIC passive tap system that sends extended range data. To start this channel:

1. Add a channel with the TADIL-A-PEDO interface, if necessary.

2. Highlight the channel and click EDIT to open the EDIT window and configure the channel. Settings can be different for each site. See the system administrator for correct settings.

3. Toggle ON the EXTENDED RANGE checkbox if connected to an SAIC passive tap box providing extended range data.

4. Choose STEREOGRAPHIC in the POSITIONING box if connected to the ADSI system. If not connected to the ADSI, choose COSINE CORRECTION.

5. Click APPLY to save the changes.

6. Highlight the channel in the COMMUNICATIONS window and select START from the pop-up menu.

7. To start the channel STATUS window, highlight the channel in the COMMUNICATIONS window and select START from the pop-up menu.

Starting TADIL-A-PIH

> To start this channel:

1. Add a channel with the TADIL-A-PIH interface, if necessary.

2. Highlight the channel and click EDIT to open the EDIT window and configure the channel. Settings can be different for each site. See the system administrator for correct settings.

3. Choose STEREOGRAPHIC in the POSITIONING box if connected to the ADSI system. If not connected to the ADSI, choose COSINE CORRECTION.

4. Click APPLY to save the changes.

5. Highlight the channel in the COMMUNICATIONS window and select START from the pop-up menu.

6. To start the channel STATUS window, highlight the channel in the COMMUNICATIONS window and select START from the pop-up menu.

Starting TADIL-AB

> To start this channel:

1. Load a TADIL-AB Table data segment as described in the *TADIL-AB Installation Procedures*.

2. Add a channel with the TADIL-AB interface.

3. Highlight the channel and click EDIT. Settings can be different for each site. See the system administrator for correct settings.

4. Click APPLY to save the changes.

5. Highlight the channel in the COMMUNICATIONS window and select START from the pop-up menu.

6. To start the channel STATUS window, highlight the channel in the COMMUNICATIONS window and select START from the pop-up menu.

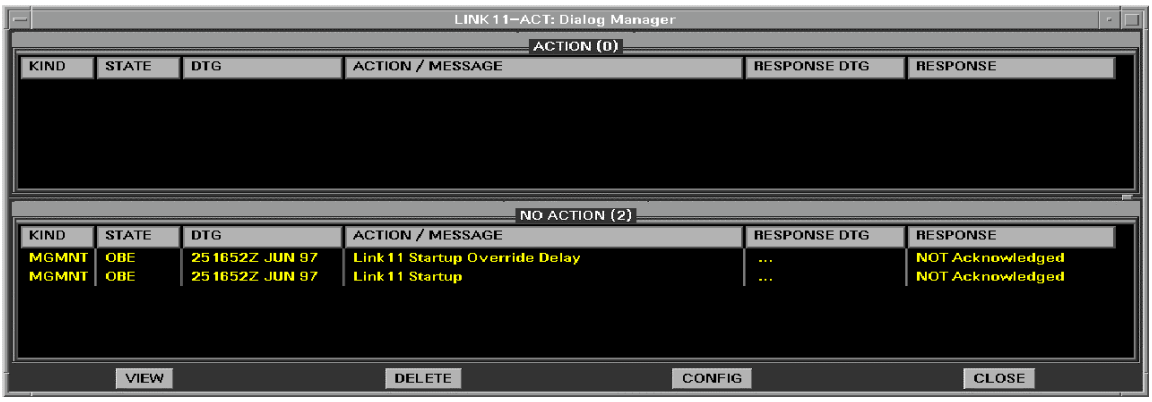
7. After TADIL-AB channel is started, the DIALOG MANAGER window is automatically displayed (described below). A notice window if displayed containing the current configuration settings. To change these settings, use the CONFIGURATION CONTROL window (described below).

Dialog Manager

The DIALOG MANAGER window opens when a TADIL-AB channel is started. Use the DIALOG MANAGER to:

- configure an alert filter for messages.
- view scrolling lists of messages in ACTION and NO ACTION categories.

The DIALOG MANAGER window opens when the TADIL-A channel is started.



About the DIALOG MANAGER Window:

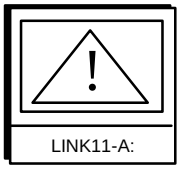
- Messages in the ACTION list:
  - create an entry in the list and open an alert window on the screen (if set to display) prompting the user for a response.
  - are displayed in red until there is a response.
  - are moved to the NO ACTION list and displayed in yellow after the user responds.
- Messages in the NO ACTION list
  - create an entry in the list and open an alert window on the screen if set to display.
  - The only response required is to click OK.
  - are displayed in yellow.
- Click the small box on the horizontal line between the two sections and drag up or down to adjust the size of each section.

DIALOG MANAGER Window Actions

> CLOSE—the window.

- The window becomes an icon at the bottom of the screen (shown below).

- The colors of the icon invert when alerts are pending, or waiting for a response.
- Double-click the icon to open the window.



> CONFIG—the alert filter (described in *Configure Message Attributes*).

> DELETE—a message.

1. Highlight one or more messages in either list.
2. Click DELETE.

> SELECT ALL (pop-up option)—select all messages in both lists.

> SELECT ALL ACTION (pop-up option)—select all messages in the ACTION list.

> SELECT ALL NO ACTION (pop-up option)—select all messages in the NO ACTION list.

> UNSELECT ALL (pop-up option)—deselect all messages in both lists.

> UNSELECT ALL ACTION (pop-up option)—deselect all messages in the ACTION list.

> UNSELECT ALL NO ACTION (pop-up option)—deselect all messages in the NO ACTION list.

> VIEW—open an alert window to respond to a message.

DIALOG MANAGER Window Fields

KIND

Kind of message.

MANAGEMENT—such as Link Startup messages

ALERT—such as Reporting Responsibility changes

INTERNAL—such as Database full

STATE

PENDING—message awaiting response

OVERCOME BY EVENTS (OBE)—message acknowledged or expired. (Some alerts will disappear from the screen after a set length of time without operator action, such as Link Startup and Link11 Startup Override Delay.)

DTG

Date and time of message.

ACTION/MESSAGE

Name of message.

RESPONSE DTG

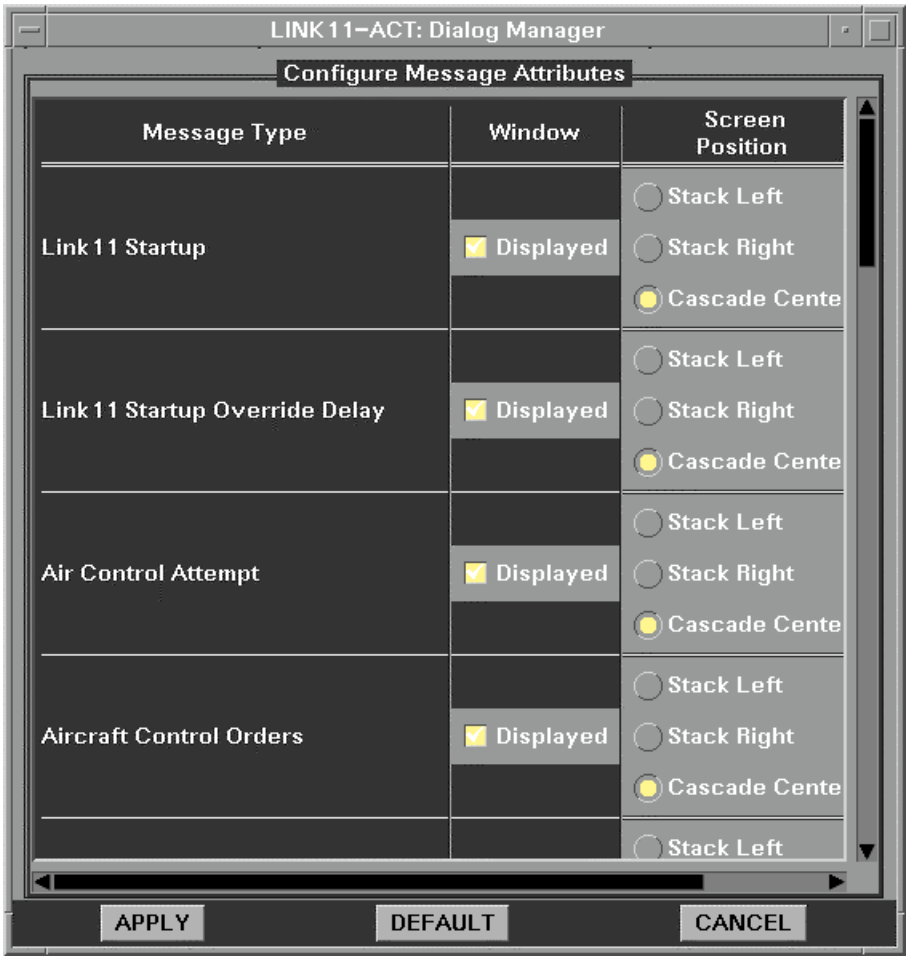
Date and time of response.

RESPONSE

Response to message.

Configure Message Attributes

Use this DIALOG MANAGER window to configure the alert filter. Click CONFIG in the DIALOG MANAGER window.



> To configure the alert filter:

1. Click the radio buttons and checkboxes to set message attributes for each message type.

2. Set maximum number for each message type.

3. Click APPLY to save the changes, or click CANCEL to discard.

DIALOG MANAGER Window Actions

> DEFAULT—sets all DISPLAYED fields in the WINDOW column to ON and all SCREEN POSITIONS to CASCADE CENTER.

> ALL DISPLAYED (pop-up menu)—toggles all DISPLAYED checkboxes ON.

> ALL NOT DISPLAYED (pop-up menu)—toggles all DISPLAYED checkboxes OFF.

> ALL STACK LEFT (pop-up menu)—toggles all SCREEN POSITION to STACK LEFT.

> ALL STACK RIGHT (pop-up menu)—toggles all SCREEN POSITION to STACK RIGHT.

> ALL CASCADE CENTER (pop-up menu)—toggles all SCREEN POSITION to CASCADE CENTER.

> APPLY (pop-up menu)—saves changes and closes window.

> CLOSE (pop-up menu)—closes the window without saving changes.

DIALOG MANAGER Window Fields

MESSAGE TYPE
Type of alert.

WINDOW
Designate if an alert is displayed.

SCREEN POSITION
Designate where alerts display on screen.

MAXIMUM NUMBER
Maximum number of each message type allowed in the list. When the maximum number is reached, the oldest messages are deleted.

Start POFA

> To start a POFA channel:

1. Add a channel with the POFA interface, if needed.

2. Highlight the channel and click EDIT to open the EDIT window and configure the channel. Settings can be different for each site. See the system administrator for correct settings.

3. Click APPLY to save the changes.

4. Highlight the channel in the COMMUNICATIONS window and select START from the pop-up menu.

When the POFA channel is started, the POFA SINGLE- (or MULTI-) STATION SUMMARY WINDOW is displayed. This window is described in *POFA Single- or Multi- Station Summary Window.*

Start MX512P

> To start an MX512P channel:

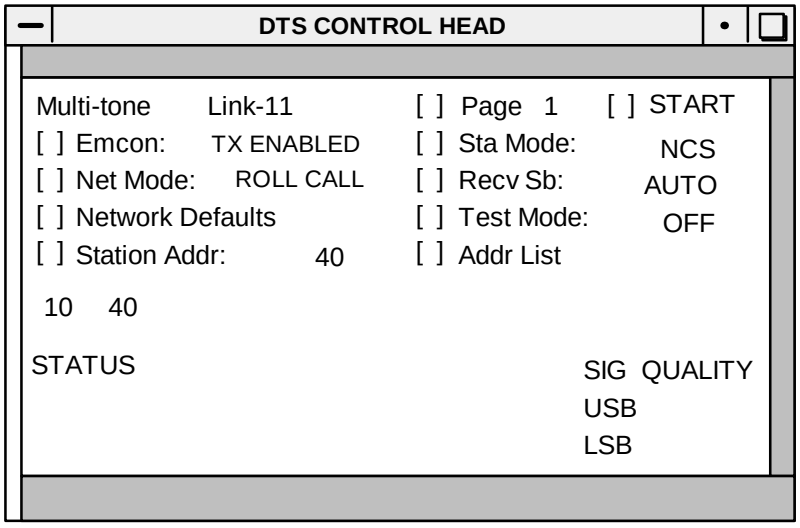
1. Add a channel with the MX512P interface, if needed.

2. Highlight the channel and click EDIT to open the EDIT window and configure the channel. Settings can be different for each site. See the system administrator for correct settings.

3. Click APPLY to save the changes.

4. Highlight the channel in the COMMUNICATIONS window and select START from the pop-up menu.

When the MX512P channel is started a window similar to the one shown below opens to provide remote control of the DTS.



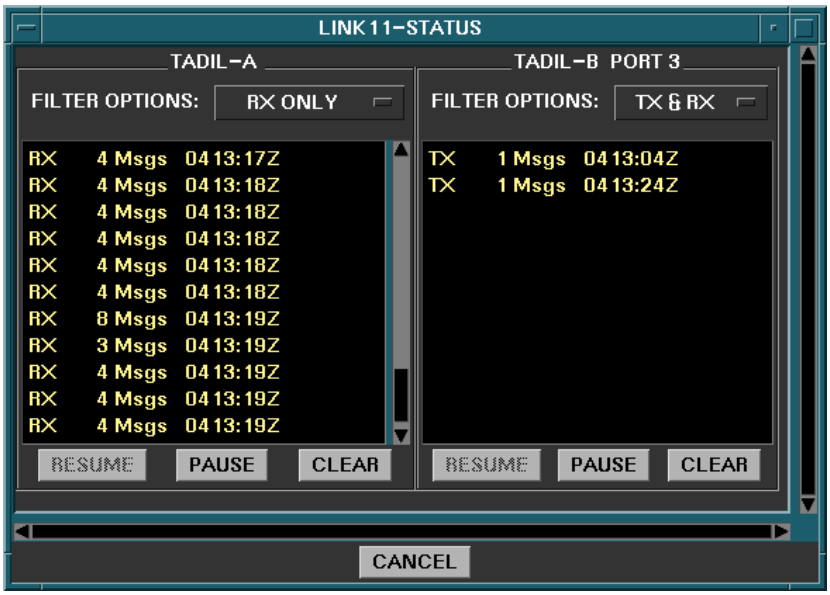
This window is similar to the one on the front of some Data Terminal Sets and

allows the user to configure and control the DTS. Refer to the DTS documentation for information about the fields and settings in this window.

Channel Status

To check the status of a TADIL-A channel, the channel must be ON.

1. Highlight a TADIL-AB channel in the COMMUNICATIONS window.
2. Select WINDOW from the pop-up menu to open the LINK11 STATUS window.



About the TADIL-AB STATUS Window:

The TADIL-AB STATUS window displays a scrolling list of messages transmitted and received on the TADIL-A and TADIL-B interfaces. If no TADIL-B ports are active, no TADIL-B information is displayed.

- The list holds up to 100 messages.
  - The list is automatically updated.
  - When the list contains 100 messages, the oldest messages are overwritten with new messages.
  - A blank line appears at the end of the list.
- Radio buttons determine the type of messages displayed. (Choose RX ONLY for Passive Link.)

- Message contents can be viewed by clicking on a message in the list (see *View a Message*).

TADIL-AB STATUS Window Actions:

> ARCHIVE—save the list of messages to a selected file. (Described in *Archive Files.*)

> CLEAR—removes all messages from the scroll list.

> EXIT—closes the window.

> PAUSE/RESUME—pauses the scrolling list, or resumes scrolling.

TADIL-A STATUS Window Fields:

TX & RX
Transmitted and received messages.

TX ONLY
Transmitted messages only.

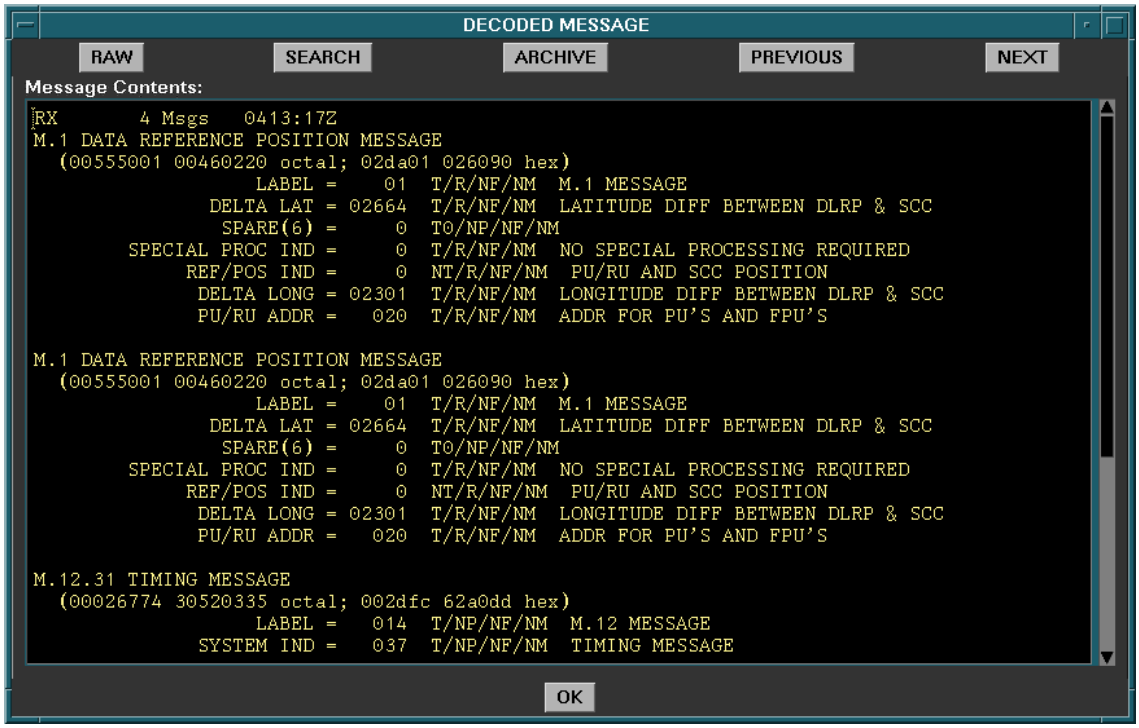
RX ONLY
Received messages only.

EF & TX & RX (TADIL-A only)
External functions, received and transmitted messages. Extended functions include Prepare to Transmit (PTT) and Prepare to Receive (PTR) messages.

OFF
Link activity is not monitored.

View a Message

To view the message contents, click on a message in the scrolling list of the TADIL-AB STATUS window to open the DECODED MESSAGE window



DECODED MESSAGE Window Actions

> RAW—view raw data for the message.

> SEARCH—not yet implemented.

> ARCHIVE—save the message to a selected file. (Described in *Archive Messages.*)

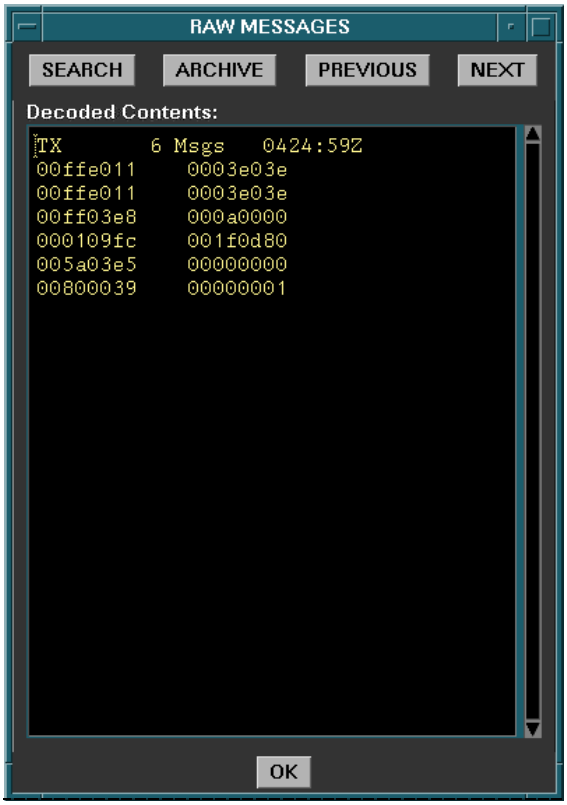
> PREVIOUS—view the previous message in the TADIL-AB STATUS scrolling list.

> NEXT—view the next message in the TADIL-AB STATUS scrolling list.

> OK—close the window.

View Raw Message Data

To view raw data for the selected message, click RAW in the DECODED MESSAGE window to open the RAW MESSAGE window.



RAW MESSAGE Window Actions

> SEARCH—not yet implemented.

> ARCHIVE—save the raw message to a selected file. (Described in *Archive Messages.*)

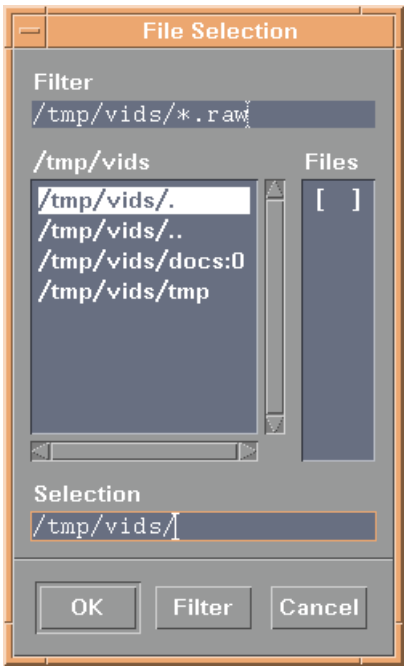
> PREVIOUS—view the previous message in the TADIL-AB STATUS scrolling list.

> NEXT—view the next message in the TADIL-AB STATUS scrolling list.

> OK—close the window.

Archive Messages

Click ARCHIVE to open the DESTIATION FILE window.



About the DESTINATION FILE Window:

- Messages can be archived to a user-defined file in the default directory or to a user-defined directory and file.
  - The default directory is /tmp/vids.
  - This directory is *temporary*—contents are deleted each time the system is started.
- The window lists the directories, or files within a highlighted directory, that meet the filter parameters.

> To archive messages:

1. Use the FILTER field to search for directories or files that match filter parameters.
   - To search for directories: enter filter parameters and click FILTER.
   - To search for files within a directory: highlight a directory in the scroll list, enter filter parameters, and click FILTER.
2. In the SELECTION field, enter the path name of the file for the archived messages.

- Enter a new file name, or select an existing file from the FILES list.
- If messages are saved in an existing file, the new archive information will overwrite the contents of the file.

3. Click OK to save the file, or CANCEL to discard the process.

Track Windows

Track windows enable the operator to view received Link tracks, or view and edit transmit tracks.

C View windows, which cannot be edited, are the only windows available with passive the passive TADIL-A channels.

C View, edit, and new track windows are available with TADIL-AB channel.

C All possible fields that may appear in a track window are described *Track Window Fields*, categorized as follows:

- SUMMARY
- TRACK NUMBERS
- RELATED INFORMATION
- STATUS
- ATTRIBUTES
- LAST REPORT
- WEAPONS STATUS
- TRACK INTELLIGENCE

C Each track window contains an appropriate subset of these fields, depending on implementation and track type. Track types are described in *New Link Track.*

Track Window Actions

> CANCEL—Close the window without saving changes.

> CENTER (pop-up option)—Center the tactical display on the selected track.

> CHANGE CATEGORY —Change category from Air to Surface or from Surface to Air *only.*

> DELETE (pop-up option)—Delete the track.

> DELETE (in *Related Information Box*)—breaks a track association set by your system.

1. Highlight one associated track in the list.
2. Click DELETE to break the association.

> EDIT—Open the EDIT window for the track.

> EMERGENCY ON/OFF (pop-up option)—Toggle EMERGENCY status checkbox on or off.

> EXIT—Close the window and exit the option.

> FORCE TELL ON/OFF (pop-up option)—Toggle FORCE TELL status checkbox on or off.

> NEXT—View next EDIT window (when multiple tracks are selected).

> NU-TRK (pop-up option)—Create a platform track from the Link track.

> GO TO PARENT (pop-up option)—Go to the parent track EDIT window.

> PREVIOUS—View previous EDIT window (when multiple tracks are selected).

> PRINT (pop-up option)—Print a hardcopy summary of track database information for the selected track.

> REQUEST 19-BIT TRACK NUMBER UPDATE (pop-up option)—Request update of 19-bit track number.

> REQUEST NATO TRACK NUMBER UPDATE (pop-up option)—Request update of NATO track number.

> SAVE—Save changes to track.

> SEND CLEAR IFF (pop-up option)—Clear IFF values to zero and transmit to other PUs.

1. Toggle checkboxes ON for each IFF mode to be cleared.
2. Click OK to clear and transmit or CANCEL to discard change.

> SEND CLEAR SPECIAL CODE (pop-up option)—Clear DI, also known as Special Code.

> TAKE INTO COMMON STORES (NON-REAL TIME) (pop-up option)—Bring track into local stores to edit information.

> TRACK ASSOC—opens the TRACK ASSOCIATION window (described in *Track Association Window.*)

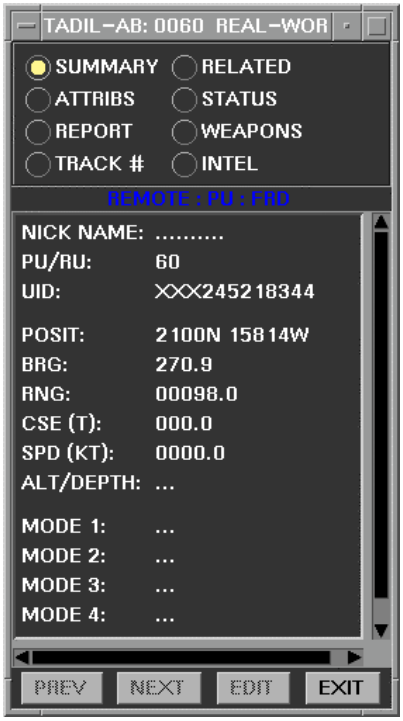
> XMIT—Transmit the track.

> STOP XMIT—Stop transmitting track.

Track Window Fields

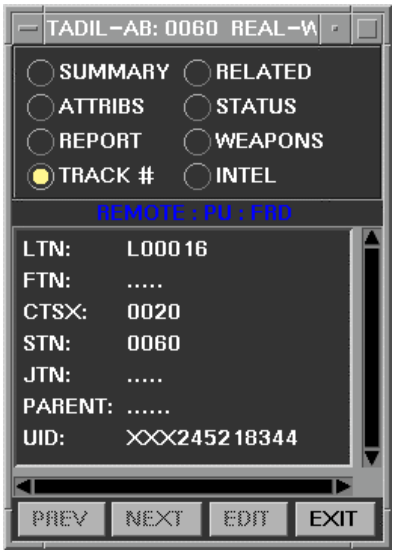
SUMMARY

This window displays a summary of the track's attributes. Descriptions of these fields can be found below. These fields are view-only.



TRACK NUMBERS

The system assigns track numbers when a new track is saved. The fields in this window are view-only.



LTN

Local track number, used internally by the system for track identification.

FTN

FOTC track number.

CTSX

Unique local Link track number, assigned when a track enters the Link.

STN

System track number. This is also known as the Naval Tactical Display System (NTDS) track number.

JTN

TADIL-J track number.

PARENT

Local track number of a Platform track (if the Link track is associated with a Platform track).

UID (ashore sites only)

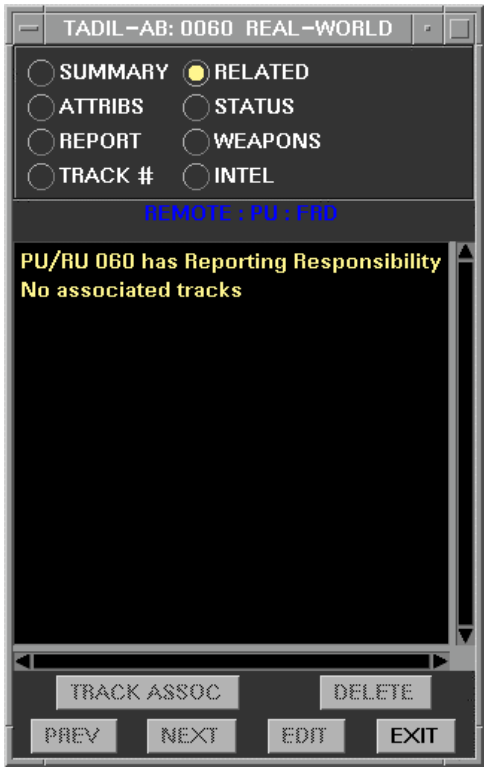
Unique identifier for the track: three letters (site reporting the track) followed by a series of numbers (to uniquely identify the track).

RELATED INFORMATION

This window lists the following information:

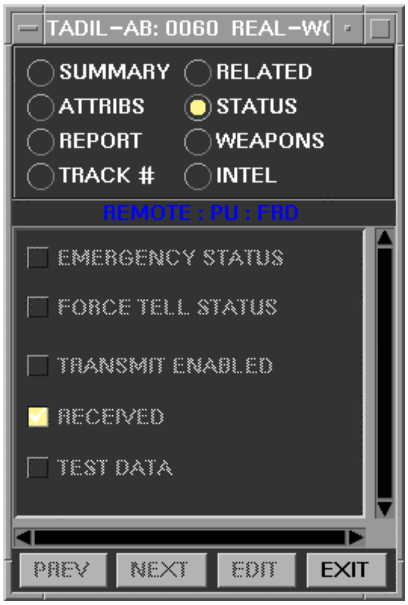
- PU with reporting responsibility
- Track associations
- AOP relationships

- Controlling relationships
- Identification for this track assigned by other Link channels



STATUS

This window lists view-only information.



EMERGENCY STATUS

ON—overrides display filters; the track always displays.

OFF—obeys display filters.

FORCE TELL STATUS

ON—overrides display filters; the track always displays.

OFF—obeys display filters.

SPI

Special Processing Indicator.

ON—track derived from intelligence sources.

TRANSMIT ENABLED

Track is selected for transmission.

RECEIVED

Track is received from Link.

TEST DATA

Inactive.

ATTRIBUTES

AB LAYER

Indicates if the sonar is above or below the layer.

ADDRESSEE

Unit address to receive the pointer. The list of available PUs is generated by the PUs currently reporting on the network.

ALTITUDE FOR WATCH

Best altitude for radar watch.

AMP CHAR
Amplifying characteristics of the emitter.

ANT POLARIZATION
Antenna polarization.

ASW AIRCRAFT TYPE
Type of ASW aircraft.

ASW CLASS
Classification of track.

ASW CLASS AMP
Classification amplifier.

ASW PT TYPE
Type of ASW point.

ASW SENSOR
Type of ASW sensor.

AUDIO PRESENCE
Indicates if audio is present for the track.

BEARING
Bearing for the track.

BEARING 1
AOU bearing.

BEARING 2
A second bearing for the track displays if an ambiguous bearing report exists.

BEARING ACCURACY
Accuracy, in degrees, of the bearing track. The accuracy is equal to or better than the value displayed in this field.

BEARING DRIFT
Direction of change (drift) of the track.

BROAD CLASS
Broad classification of the emitter.

BROADBAND
Indicates the presence of broadband noise.

CALIBRATION STATUS
Calibration status of the sonobuoy, either Calibrated or No Statement.

CATEGORY
Track category.

CHANNEL NUMBER
Sonobuoy channel number.

CLASS AMP
Class amplification.

CLASS KIND
Classification of the track.

CONFIDENCE
Degree of confidence of the reported emitter evaluation.

CONTACT DEPTH
Depth of contact, such as Estimated shallow or Bottomed.

CONTACT STATUS
Indicates active or inactive sonobuoy.

CONTROLLING TN
Track in control of aircraft.

DEPTH
Depth for the track.
Depth sonobuoy transducer is suspended below surface.

DEPTH (QUALITATIVE)
Relative depth of track, such as Estimated Shallow or Periscope Depth.

DI
Discrete Identifier, which is a special four-digit code.

DOPPLER
Doppler associated with the track.

DR TYPE
Data Report Type. Type of subsurface track being reported.

DURATION
Total time of notack area designation.

ELEVATION ANGLE
Elevation of intercept.

EMITTER NUMBER
Number indicating a specific emitter.

ERR
AOU bearing error.

EXPANSION/CONTRACTION
Indicates if Area of Probability is expanding or contracting.

FREQ 1
Two additional associated acoustic frequencies may be reported for an ASW Bearing Track. This displays the first of the associated frequencies.

FREQ 2
Second associated frequency.

FREQ RANGE
Range of frequency.

FREQUENCY (Hz)
Frequency in Hz.

FUEL
Increments of burnable fuel aboard aircraft.

HEIGHT SOURCE
Source of height report.

ID
TADIL-A threat ID.

ID AMP
Further amplification of the identity of the track. Possible entries for this field are determined by the track type.

Inventory Fields
Number of useable weapons, including:

DEPTH BOMB INV (CONV)

DEPTH BOMB INV (SPCL)

TORPEDO INV (CONV)

TORPEDO INV (SPCL)

MISSILE INV (CONV))

MISSILE INV (SPCL)

ROCKET INV

SONOBUOY INV (ACTIVE))

SONOBUOY INV (PASSIVE)

JITTER
Indicates presence of jitter.

JRSL
Jammer received signal level.

KIND
Kind of report.

MISSILE CAP
Missile capability, or types of missiles for the track.

MISSION
Type of mission, such as Reconnaissance or Escort.

MODE 1 IFF
Identification Friend or Foe—code which gives a general description of the mission. Mode 1 IFF is for military use.

MODE 2 IFF
Code which provides an exact ID for the platform or track.

This number is used in track correlation and is also used with the PIF DON'T CARE and PIF NICKNAMES options from the TRACK TABLES option, found under the TRACKS menu.

MODE 3 IFF
Code describing the type of mission and the general direction of travel. Mode 3 IFF can be commercial, military, or can come from other sources. It can be either friendly or non-friendly.

MODE 4 IFF
Interrogation status.

NICK NAME
Local name for the track. This name is not transmitted to other locations.

NRT
Indicates if track is being reported in real time or non-real time.

OBSERVE TIME
Time track was observed. Field defaults to the current time when this window opens, and may be changed to the actual time the track was observed.

OPERATOR
Specific operator within a unit to receive the pointer.

ORIGINATOR

Unit address of pointer where report originated. This field is view-only. It is set to owntrack's STN.

PLAT EVAL CONF

Platform Evaluation Confidence—level of confidence that the attribute values displayed are accurate.

PLATFORM

Displays platform type.

PLATFORM NUMBER

Number indicating the emitter platform.

POINT

Type of point.

POINT AMP

Amplifying characteristics of the point.

POSS. SUB

Confidence level of identifying a track which is a possible submarine.

PRF (Hz)

Pulse Repetition Frequency measured in Hz.

PRI AMP

Primary amplifier.

PROBABILITY FACTOR

Level of confidence that track is within the area of probability.

PT AMPLIFY

Amplifies point type.

PT TYPE

Point type.

PU/RU

Participating or Reporting Unit. This identifies the reporting source. (This field is view-only.)

PULSE WIDTH (uSec)

Pulse width measured in microseconds.

RADIUS

Radius of the notack area.

RAID SIZE

Number of objects in track.

RANGE (YDS)

Distance to reported contact , in 250 yard increments.

RANGE ACCURACY (MI)

Range accuracy in five-mile increments.

RECEIVE QUALITY

Receive quality for the track.

RELATED TN

Related local TADIL-A track number for a Link track, point, bearing, or fix.

REPORT TYPE

Type of ASW Bearing being reported.

RNG

AOU bearing range.

SCAN CHAR

Scan characterization.

SCAN PERIOD/SCAN RATE

Antenna scan information. Either seconds per scan (period) or frequency range (rate).

SENSOR DEPTH

Reported sensor depth in 100-foot increments.

Sensor Status Fields

Status of various sensors, either OPERATIONAL or NOT OPERABLE. Sensors include:

RADAR

INFRA RED

LOFAR

MAD

SEARCH LIGHT

LLLTV

DIFAR

SONOBUOY RECEIVER

RECORDER 1

RECORDER 2

RECORDER 3

RECORDER 4

SONAR

DICASS

CASS

ADP 1

ADP 2

SOURCE

Source of the report.

SPP

Sound Propagation Path used to detect the acoustic track.

SRC FREQ

Source Acoustic Frequency of the bearing.

START

Start time of notack area designation.

STN

Manually entered System Track Number—overrides system-assigned number.

TIME ESTABLISHED

Time track was established.

Time track was first reported.

TIME LOST

Elapsed time since sonobuoy contact was lost (from 5 to 360 minutes).

TIME OF UPDATE

Time the last report was received for this track.

TIME REMAINING

Time remaining before sonobuoy expires.

Time Select Button

Contains one or more of the following fields:

CONTACT DURATION—Total continuous contact time.

GMT OF ACQSTN/OBSRVTN/EST/COMCNT—time track was first observed.

GMT OF INITIAL OBSERVATION—time track was first observed.

GMT OF OBSERVATION/INFORMATION—time of updated information.

GMT OF TIME LOST—time observation was lost.

TIME STALE

Time since report was updated.

TN ORIG

Track number of the unit that originated the report.

TN ORIGINATOR

Track number of the unit originating the bearing report. Shown only if the originating unit is not the reporting unit.

TQ

Track quality number as reported in the LINK. Values include NON-REAL-TRACK or a number between 1 and 7. The higher the number, the more accurate the report.

TRANSDUCER

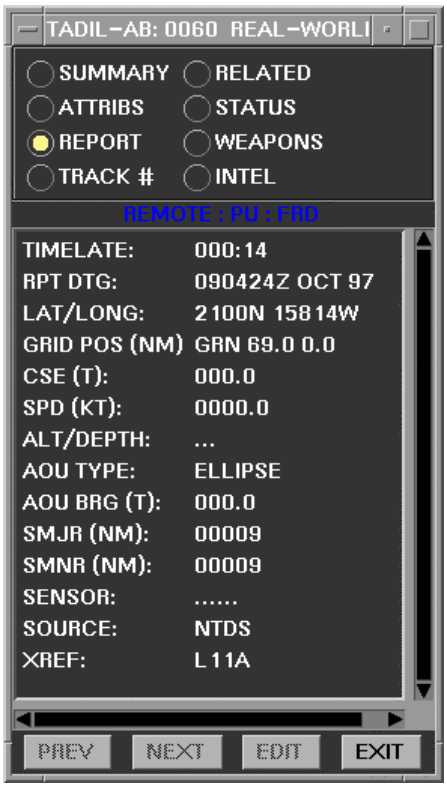
Type of sonobuoy.

X/C RATE (KTS)

Rate, in knots, at which the Area of Probability is expanding or contracting.

LAST REPORT

This window displays information about the last reported position for the track. The LAT/LONG, CSE, and SPD fields can be edited. All other fields are view-only.



ALTITUDE

Altitude for the track.

AOU BRG (T)

AOU bearing for the track in degrees true.

AOU TYPE

Area of uncertainty. Default type is an ELLIPSE with semi-major and semi-minor axes of 9 NM each.

CSE (T)

Course for track in degrees true.

GRID POS (NM)

Grid x and y coordinates track is offset from DLRP.

LAT/LONG

Latitude and longitude of the reported position.

RPT DTG

Date-time group for the report.

SPD (KT)
Speed of track in knots.

SENSOR
Sensor type used to pick up the track at its last reported position.

SMJR (NM)
Semi-major axis length of the ellipse.

SMNR (NM)
Semi-minor axis length of the ellipse.

SOURCE
Source code, NTDS, for the track.

TIMELATE
Amount of time elapsed since report was received.

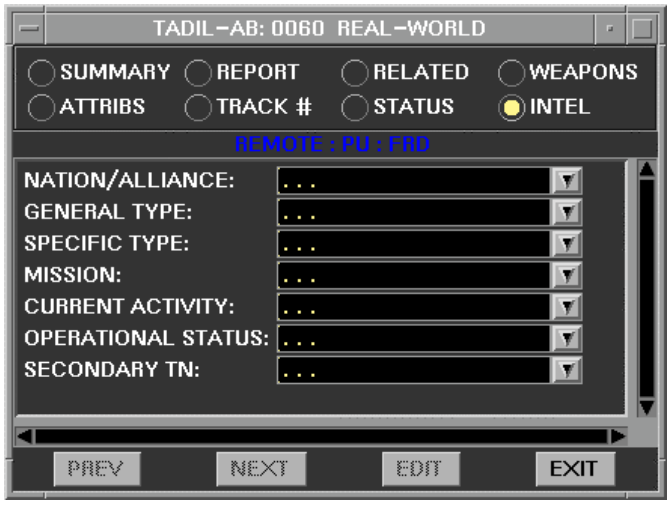
XREF
Source cross-reference code for the Command originating the track report.

WEAPON STATUS

This window displays weapon information about the track. The fields are view-only.

TRACK INTELLIGENCE

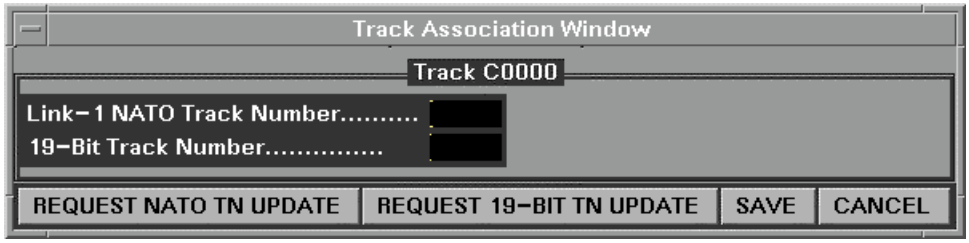
This window displays intelligence data received for the track. The fields are view-only.



Track Association Window

Use this option to update track associations set by your system or view associated track numbers assigned by other systems on the Link.

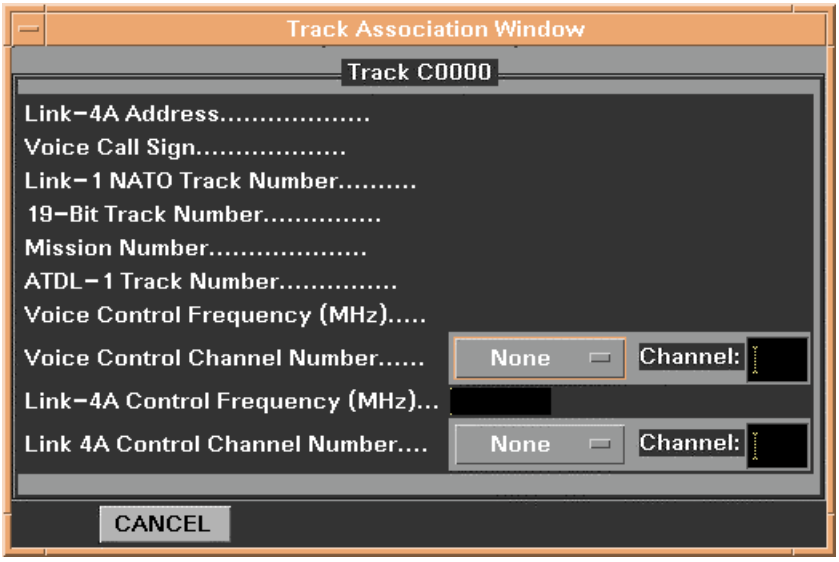
Click TRACK ASSOC to open the TRACK ASSOCIATION WINDOW. Most implementations display the following window:



How to use the TRACK ASSOCIATION WINDOW:

1. Associate a 19-bit track number with the track one of two ways:
   - Enter a number in the field.
   - Click REQUEST 19-BIT TN UPDATE to request an update to the 19-bit number from other PUs.
2. Click SAVE to save the changes, or CANCEL to discard.

Some implementations receive or transmit more detailed information and display additional fields, similar to the following window.



How to use the TRACK ASSOCIATION WINDOW:

If the selected implementation transmits the information, the field can be edited. If transmission is not allowed, the fields are view-only.

1. Associate a 19-bit or NATO track number with the Link track one of two ways:
   - Enter a number in the field.
   - Click REQUEST 19-BIT TN UPDATE or REQUEST NATO TN UPDATE to request an update to the 19-bit OR NATO number from other PUs.
2. Select Voice Control Channel Number and Link-4A Channel Number.
   - Click select button and choose a group.
   - Enter channel number in the CHANNEL field.
3. Click SAVE to save the changes, or CANCEL to discard.

TRACK ASSOCIATION WINDOW Fields:

LINK-4A ADDRESS

Address of aircraft.

VOICE CALL SIGN

Radio call sign for voice frequency.

LINK-1 NATO TRACK NUMBER

NATO track number.

19-BIT TRACK NUMBER
19-bit track number assigned to the track.

MISSION NUMBER
Mission number assigned to the track.

ATDL-1 TRACK NUMBER
ATDL track number assigned to the track.

VOICE CONTROL FREQUENCY (MHz)
UHF frequency for voice communications.

VOICE CONTROL CHANNEL NUMBER
Channel for voice communications.

LINK-4A CONTROL FREQUENCY (MHz)
UHF frequency for voice communications.

LINK-4A CHANNEL NUMBER

Channel for voice communications.

Notes

View Link Tracks

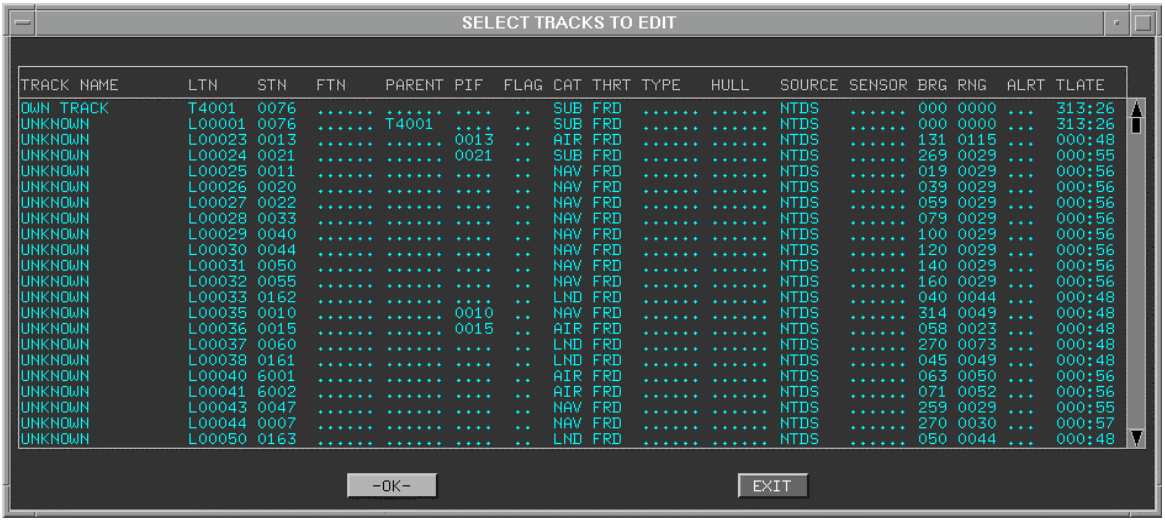
Windows to view information for a selected track are the same for both passive and active channels, though the menu option to open the VIEW window is different for each.

- For passive channels, select EDIT TRACK from the TRACKS menu.
- For active channels, select EDIT LINK TRACK from the TADIL-A menu.

All window fields are described in *Track Windows*. The fields in a VIEW window cannot be edited. To edit a track for an active channel, see *Edit Link Track*.

> Use one of the following methods to open a VIEW TRACK window:

- Double-click on a track on the tactical display.
- Highlight one track on the tactical display and choose EDIT.
- Select EDIT with no tracks highlighted to open the DATABASE SEARCH window. Enter search criteria and click OK. This window is described in the Search section of the *Software User's Manual, Unified Build (TMS/UCP)*.
- Highlight more than one Link track on the tactical display and select EDIT to display the SELECT (LINK) TRACKS TO EDIT window.
    - Highlight one track or more tracks in the scroll list.
    - Click OK.


SELECT TRACKS TO EDIT
TRACK NAME LTN STN FTN PARENT PIF FLAG CAT THRT TYPE HULL SOURCE SENSOR BRG RNG ALRT TLATE
OWN TRACK T4001 0076 .... SUB FRD .... NTDS ..... 000 0000 ... 313:26
UNKNOWN L00001 0076 ..... T4001 .... .. SUB FRD .... NTDS ..... 000 0000 ... 313:26
UNKNOWN L00023 0013 .... 0013 .. AIR FRD .... NTDS ..... 131 0115 ... 000:48
UNKNOWN L00024 0021 .... 0021 .. SUB FRD .... NTDS ..... 269 0029 ... 000:55
UNKNOWN L00025 0011 .... NAV FRD .... NTDS ..... 019 0029 ... 000:56
UNKNOWN L00026 0020 .... NAV FRD .... NTDS ..... 039 0029 ... 000:56
UNKNOWN L00027 0022 .... NAV FRD .... NTDS ..... 059 0029 ... 000:56
UNKNOWN L00028 0033 .... NAV FRD .... NTDS ..... 079 0029 ... 000:56
UNKNOWN L00029 0040 .... NAV FRD .... NTDS ..... 100 0029 ... 000:56
UNKNOWN L00030 0044 .... NAV FRD .... NTDS ..... 120 0029 ... 000:56
UNKNOWN L00031 0050 .... NAV FRD .... NTDS ..... 140 0029 ... 000:56
UNKNOWN L00032 0055 .... NAV FRD .... NTDS ..... 160 0029 ... 000:56
UNKNOWN L00033 0162 .... LND FRD .... NTDS ..... 040 0044 ... 000:48
UNKNOWN L00035 0010 .... 0010 .. NAV FRD .... NTDS ..... 314 0049 ... 000:48
UNKNOWN L00036 0015 .... 0015 .. AIR FRD .... NTDS ..... 058 0023 ... 000:48
UNKNOWN L00037 0060 .... LND FRD .... NTDS ..... 270 0073 ... 000:48
UNKNOWN L00038 0161 .... LND FRD .... NTDS ..... 045 0049 ... 000:48
UNKNOWN L00040 6001 .... AIR FRD .... NTDS ..... 063 0050 ... 000:56
UNKNOWN L00041 6002 .... AIR FRD .... NTDS ..... 071 0052 ... 000:56
UNKNOWN L00043 0047 .... NAV FRD .... NTDS ..... 259 0029 ... 000:55
UNKNOWN L00044 0007 .... NAV FRD .... NTDS ..... 270 0030 ... 000:57
UNKNOWN L00050 0163 .... LND FRD .... NTDS ..... 050 0044 ... 000:48
-OK-
EXIT

Notes

TADIL-A Menus

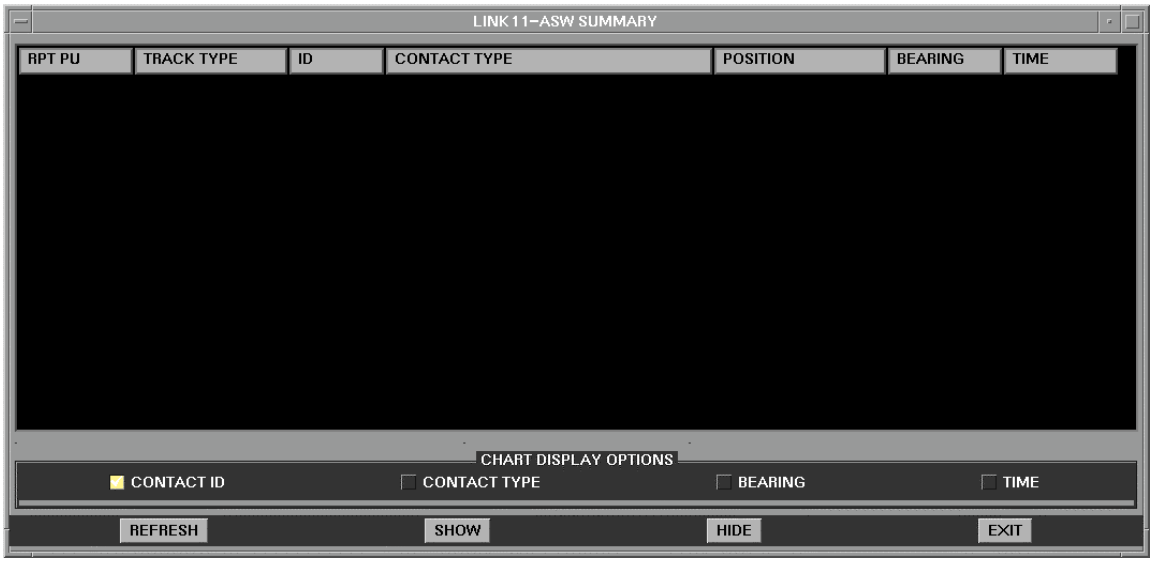
When the TADIL-AB Interface segment is loaded, a TADIL-A pull-down menu is installed on the System window. The options available depend on the selected implementation. Each implementation will have an appropriate subset of options available. All options on the System window TADIL-A menu are described in this section in alphabetical order.

Notes

ASW Summary

Use the ASW SUMMARY option to view a list of received ASW summary reports and display selected information contained in the reports.

To access this window: TADIL-A pull-down menu**:** ASW SUMMARY option.



> To view ASW summary reports:

1. Highlight one or more tracks in the list.
2. Toggle checkboxes ON for information to be displayed.
3. Click REFRESH to clear the display and show the most recent summary list.
4. Click SHOW to display the track and its information.
5. Click HIDE to remove the track from display.
6. Click EXIT to close the window.

Notes

Command Messages

Use the COMMAND MESSAGES option to view a scrolling list of command messages transmitted or received by the system and to send or view command messages.

To access this window: TADIL-A pull-down menu**:** COMMAND MESSAGES option.

> About the COMMAND MESSAGES window:

- All implementations will show Commands Received list.
- If the system implementation supports transmitting command messages, the window will contain two lists: Commands Transmitted and Commands Received.
- Click the small box on the horizontal line between the two sections and drag up or down to adjust the size of each section.

COMMAND MESSAGES Window Actions;

> DELETE—a command message.

1. Highlight one or more messages.
2. Click DELETE.

> EXIT—the window.

> SEND—a command message (described in *Send Command Message*).

> VIEW—a command message (described in *View Command Message*).

COMMAND MESSAGES Window Fields

NUMBER OF MESSAGES
Number of messages in the scroll list.

ACTION
Type of command message.

DTG
Date and time message was transmitted or received.

RESPONSE
Response to message.

WILCO (Will Comply)

CANTCO (Can't Comply)

CANTPRO (Can't Process)

NONE REQUIRED

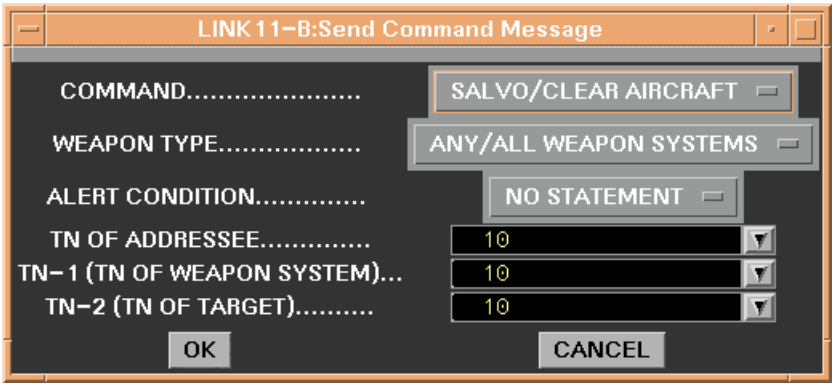
Received Command Messages

When a command message is received, an alert is generated on the Link Supervisor machine.

- The Link Supervisor responds to the alert by clicking WILCO (will comply) or a CANTCO (can't comply).
- The command message is automatically entered into the Commands Received message log.

Send Command Message

Command messages request an action be taken by the Addressee. Click SEND in the COMMAND MESSAGES window to open the SEND COMMAND MESSAGE window.



> To send a command message:

1. Select a command order, weapon type, and alert condition from the select-button lists.
2. Select track number of addressee, track number of weapon system, and track number of target from the list boxes.
3. Click OK to send the command message or CANCEL to discard.

SEND COMMAND MESSAGE Window Fields:

COMMAND ORDER
Type of command message.

WEAPON TYPE
Type of weapon.

ALERT CONDITION
Importance of command message.

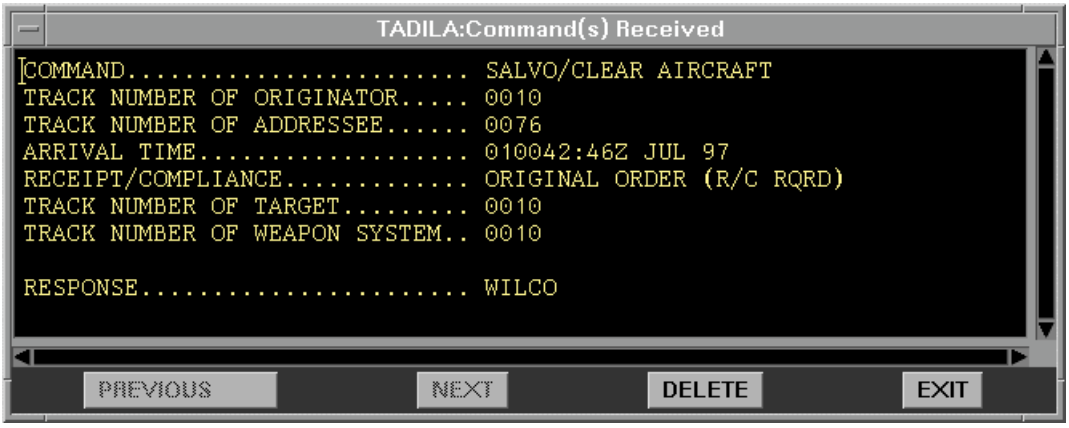
TN OF ADDRESSEE
Track number to receive the order. Can be sent to all tracks.

TN-1
Track number that has the selected weapon system.

TN-2
Track number of target.

View Command Message

The COMMAND MESSAGE window displays additional information about the selected message.



> To view a command message:

1. Highlight one or more messages in the scroll list.
2. Click VIEW to open the COMMAND MESSAGE window.

COMMAND MESSAGE Window Actions

> DELETE—the displayed message.

> EXIT—the COMMAND MESSAGE window and return to the COMMAND MESSAGES window.

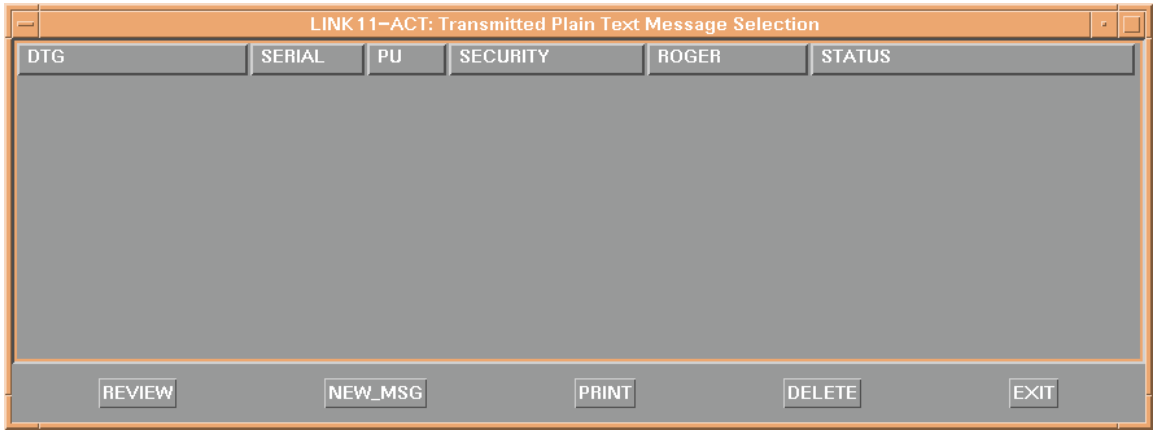
> NEXT—view next message (when more than one message is selected).

> PREVIOUS—view previous message (when more than one message is selected).

Create Plain Text Message

Use this option to create and transmit plain text messages.

Select CREATE PLAIN TEXT MESSAGE from the TADIL-A pull-down menu to open the TRANSMITTED PLAIN TEXT MESSAGE SELECTION window.



The TRANSMITTED PLAIN TEXT MESSAGE SELECTION window displays a list of plain text messages that have been saved or transmitted.

TRANSMITTED PLAIN TEXT MESSAGE SELECTION Window Actions:

> AUTO REFRESH ON/OFF—When toggled ON, a dot appears next to the option and the list of received messages is automatically updated.

> DELETE—delete a message.

1. Highlight one or more messages in the list.
2. Click DELETE.

> EXIT—close the window.

> NEW MESSAGE—create a new message. (Described in *Create a Plain Text Message*.)

> PRINT—selected message.

> REVIEW—view message. (Described in *View Transmitted Plain Text Message*.)

> SET AUTO REFRESH TIME—Set the interval, in minutes or seconds, at which the list automatically updates.

TRANSMITTED PLAIN TEXT MESSAGE SELECTION Window Fields:

DTG
Time message was transmitted.

SERIAL
Message number assigned by the system. If a T precedes the number, the message has not been sent.

PU
Recipient PU number.

SECURITY
Classification of the message.

ROGER
Indicates whether a roger is required.

STATUS
Sending status of the message and the roger-received status.

View Transmitted Plain Text Messages

To view a transmitted message, highlight one or more messages in the TRANSMITTED PLAIN TEXT MESSAGE SELECTION window and click REVIEW to open the PLAIN TEXT MESSAGE window.

PLAIN TEXT MESSAGE Window Actions:

> DELETE—delete the message.

> DUPLICATE—create a duplicate copy of the message.

1. Click DUPLICATE to open a new PLAIN TEXT MESSAGE window containing the duplicate message.
2. Make changes to the message, if needed.
3. Click SEND/RESEND to transmit the message, or click SAVE to save the message without transmitting.

> EDIT—edit a message.

1. Click EDIT to open a new PLAIN TEXT MESSAGE window containing the message text.
2. Make changes to the message.
3. Click SEND/RESEND to transmit the message, or click SAVE to save it without transmitting.

> EXIT—close the window and return to the TRANSMITTED PLAIN TEXT MESSAGE SELECTION window.

> NEXT—view next message (if more than one message was selected).

> PREVIOUS—view previous message (if more than one message was selected).

> PRINT—the message.

> SEND/RESEND—send the message.

PLAIN TEXT MESSAGE Window Fields:

DTG
Date-time group of the message. This value is automatically entered when SEND/RESEND is clicked.

ROGER
Indicates whether a roger is required.

SERIAL
Message number assigned by the system.

PU
Number of the participating unit transmitting the message.

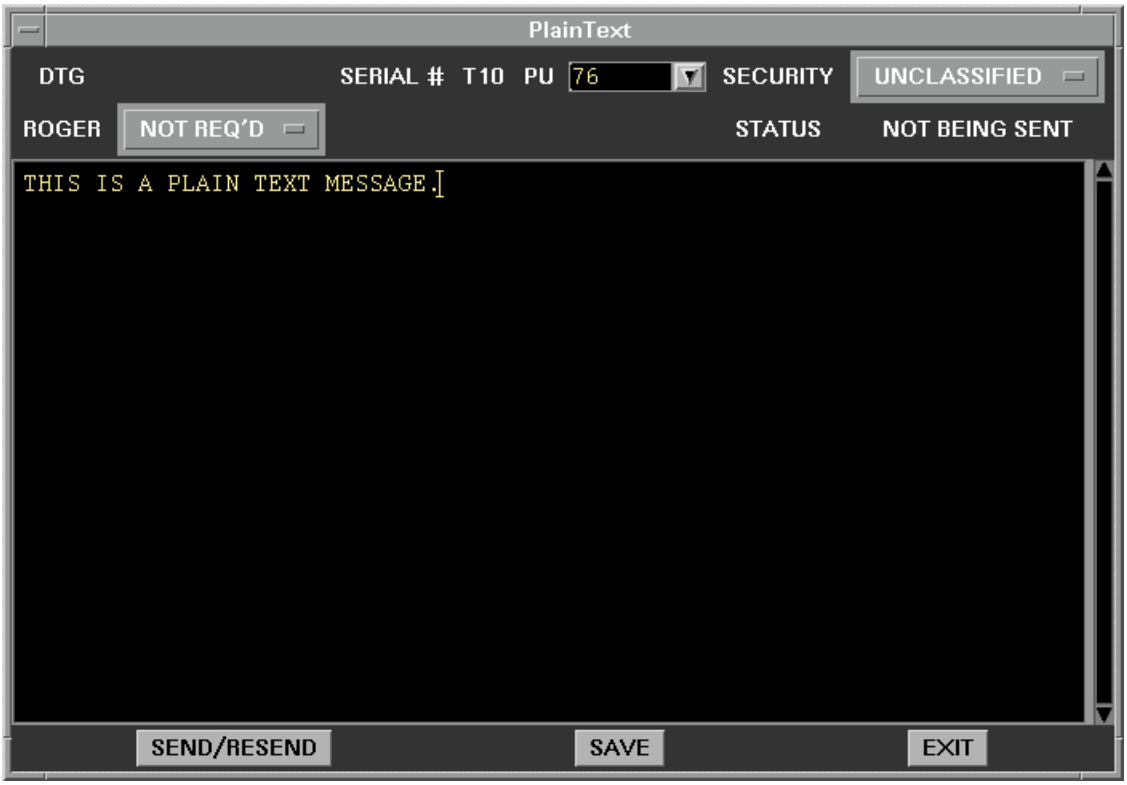
SECURITY
Classification of the message.

STATUS
Status of the message.

Create New Plain Text Message

To create a new message or edit an existing message, open the PLAIN TEXT MESSAGE window one of two ways:

- Click NEW MESSAGE from the TRANSMITTED PLAIN TEXT MESSAGE SELECTION window.
- Click EDIT when viewing a transmitted message.



> To create a new plain text message:

1. Enter text in the scroll box.
2. Click the down arrow next to the PU field and select the PU to receive the message.
3. Click the SECURITY select button and choose a classification for the message.
4. Click the ROGER select button and specify whether a roger is required.
5. Click SEND/RESEND to send the message or SAVE to save the message without transmitting.
6. Click EXIT to close the window.

PLAIN TEXT MESSAGE Window Fields:

DTG
Date-time group of the message. This value is automatically entered when SEND/RESEND is clicked.

ROGER
Indicates whether a roger is required.

SERIAL
Message number assigned by the system.

PU
Number of the participating unit to receive the message.

SECURITY
Classification of the message.

STATUS
Status of the message.

Edit Link Track

Use the EDIT LINK TRACK option to modify data for a selected track.

How to Use this Option:

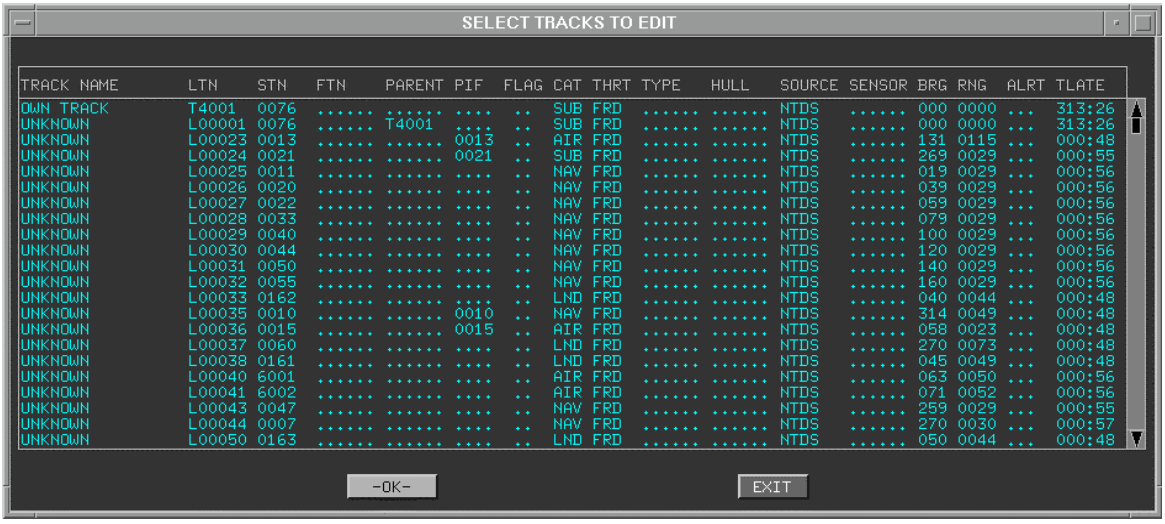
1. Select a track to edit using one of the methods described below. (Tracks received from other Participating Units (PUs) may be viewed but not edited.)
2. The VIEW window for the track opens.
3. Click EDIT from the VIEW window to open the EDIT window for the track.
4. Edit data for the track.
   - Type data, such as NICK NAME.
   - Click the select button and choose a value, such as ID.
   - Set checkboxes.
5. Save the information. (Or click CANCEL to discard it.)
   - SAVE saves the track.
   - XMIT transmits and saves the track.
6. Invalid data entered into any field appears in red when SAVE or XMIT is clicked.
   - Correct the data.
   - Click SAVE or XMIT again.

> To select tracks to edit:

- Highlight one track on the tactical display and select EDIT LINK TRACK.
- Double-click on a track on the tactical display.
- Highlight more than one track on the tactical display and select EDIT LINK TRACK to display the SELECT LINK TRACK TO EDIT window.
  - Highlight one track in the scroll list.

- Click OK.

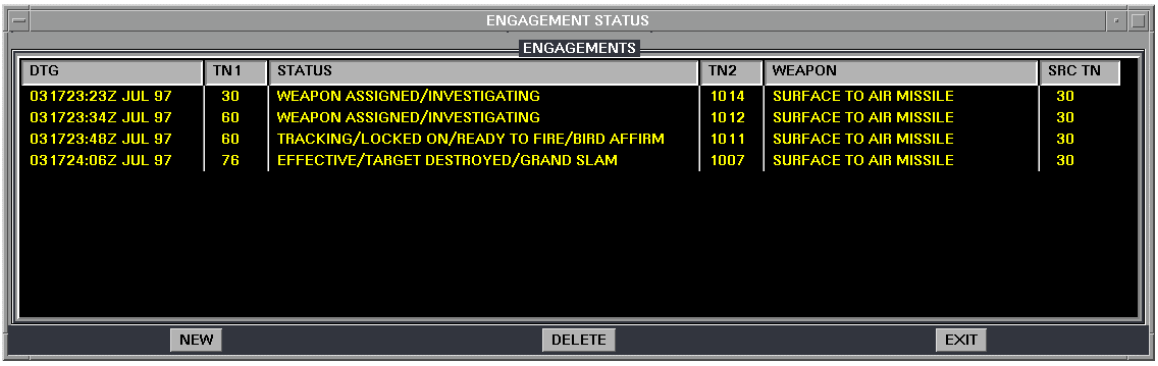
- Select EDIT LINK TRACK with no tracks highlighted to open the DATABASE SEARCH window. This window is described in the Search section of the *Software User's Manual, Unified Build (TMS/UCP)*.



Engagement Status

Use this option to define the status of weapons engaged on a target.

To access this window: TADIL-A pull-down menu **:** ENGAGEMENT STATUS option.



> How to use the ENGAGEMENT STATUS window.

1. Click NEW to send a new engagement (described in *New Engagement*).
2. To delete engagements:
   a. Highlight one or more engagements in the list
   b. Click DELETE.
3. Click EXIT to close the window.

ENGAGEMENT STATUS Window Fields

DTG

Time engagement was transmitted or received.

SRC TN

Track originating the engagement.

STATUS

Status of the engagement.

TN 1

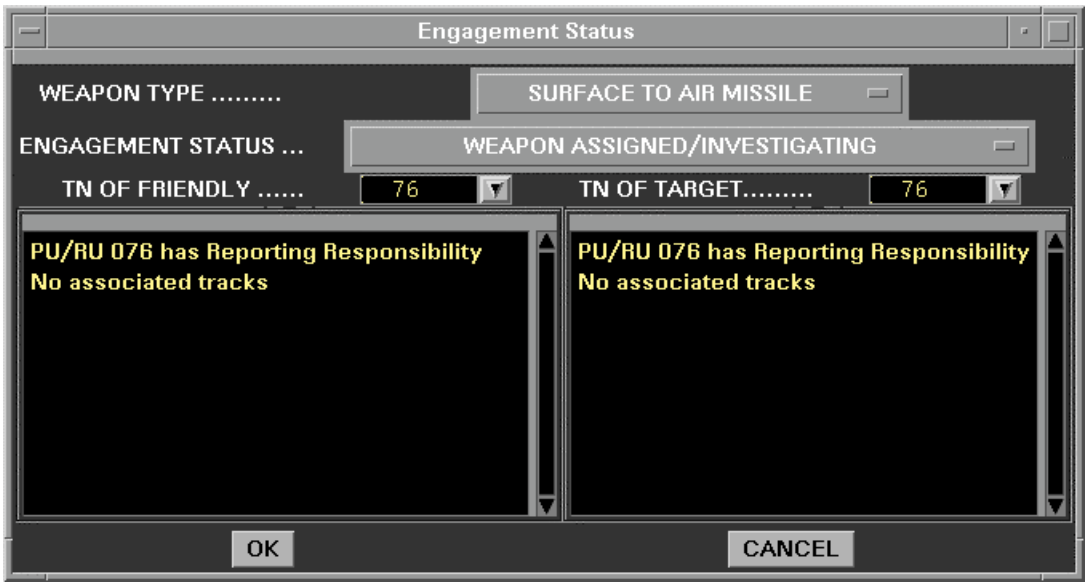
Track number that has the selected weapon system.

TN 2
Track number of target.

WEAPON
Selected weapon system.

New Engagements

Click NEW from the ENGAGEMENT STATUS window to open the following window.



This window lists the following information for the selected tracks:

- PU with reporting responsibility.
- Track associations
- AOP relationships
- Controlling relationships
- Identification for this track assigned by other TADIL-A channels.

> To set engagement status:

1. Set weapon type.
2. Set engagement status.
3. Select track number of the friendly track.

4. Select track number of target track.

5. Click OK to accept changes or CANCEL to discard.

ENGAGEMENT STATUS Window Fields:

WEAPON TYPE
Type of weapon.

ENGAGEMENT STATUS
Status of weapon engagement.

TN OF FRIENDLY
Number of friendly track.

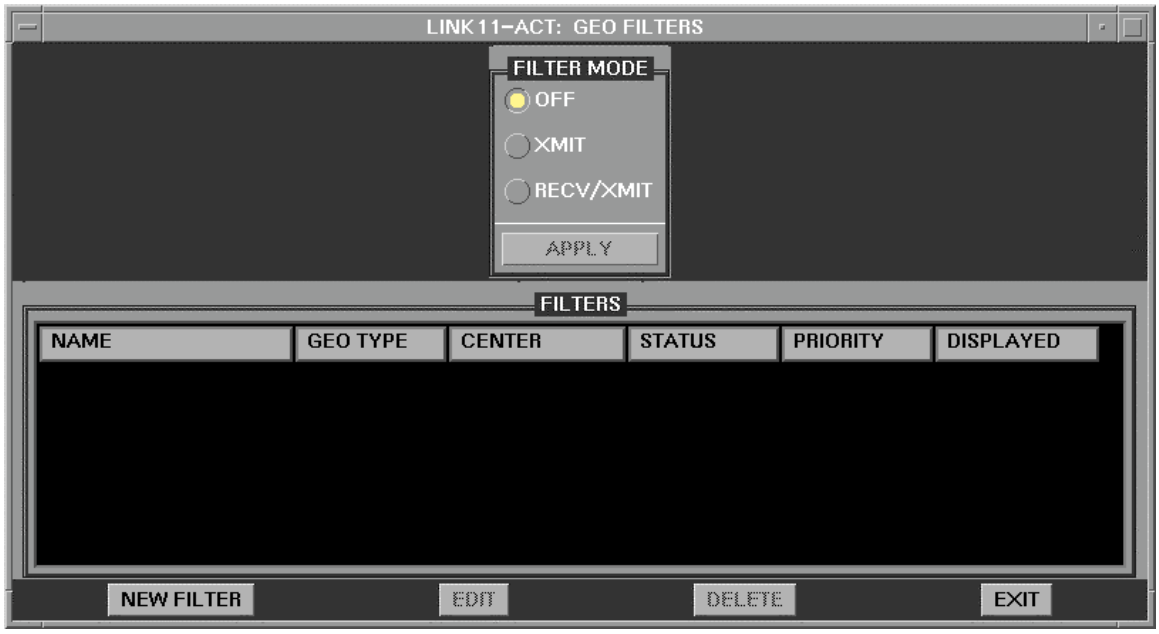
TN OF TARGET
Number of target track.

Notes

GEO Filters

Use this option to define a geographic filter that restricts transmission and receipt of Link tracks. The filter can be defined to transmit and receive only those tracks that are either inside or outside the filter area.

To access this window: TADIL-A pull-down menu **:** GEO FILTER option.



GEO FILTERS Window Actions:

> ACTIVATE FILTER—Activates the filter.

> APPLY—save changes to the filter mode.

> DEACTIVATE FILTER—Deactivates the filter.

> DELETE—delete a filter.

1. Highlight a filter in the scroll list.
2. Click DELETE.

> EDIT—edit a filter.

1. Highlight one filter in the list.

2. Click EDIT to open the EDIT FILTER window (described in *Add a Filter).*

> EXIT—close the window.

> NEW FILTER—add a new filter. Described in *Add a Filter.*

> TOGGLE OVERLAY DISPLAY—Toggles display of filter ON or OFF.

GEO FILTERS Window Fields

FILTER MODE Box

Choose one radio button:

OFF
Turn the filter off—the filters will have no effect on transmitted or received tracks.

XMIT
Turn the filter on for transmitted tracks only.

RECV/XMIT
Turn the filter on for transmitted and received tracks.

Some track types, such as emergency tracks, hostile tracks, assumed enemy tracks, unknown evaluated tracks, Interceptor/Fighter, and tracks with Force Tell ON, continue to be transmitted and received regardless of the filter parameters.

FILTERS Box

NAME
Name of the filter.

GEO TYPE
Selected shape.

CENTER
Selected center.

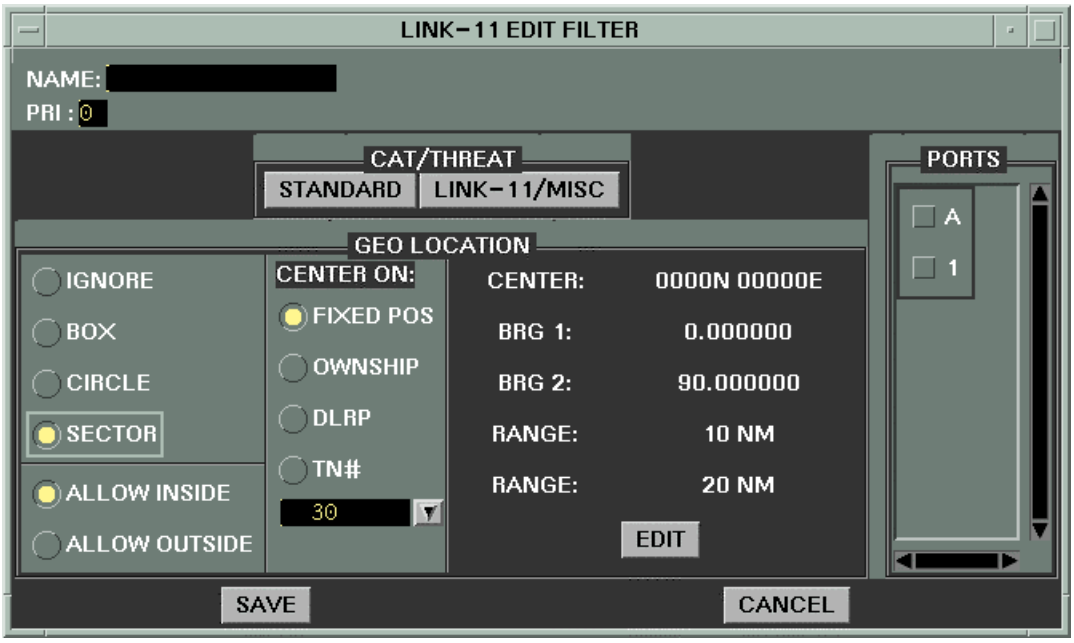
STATUS
Indicates active or inactive filter.

PRIORITY
Selected priority.

DISPLAYED
Indicates if filter is displayed.

Add a Filter

Click NEW FILTER to open the TADIL-A EDIT FILTER window. Note that the TADIL-B PORTS box is added to the EDIT GEP FILTER window to activate or deactivate ports for the filter only if TADIL-B is active.



> To edit a filter:

1. Enter a name and priority for the filter.
2. Click one radio button in each box to define filter parameters.
3. Choose STANDARD or TADIL-A/MISC in the CAT/THREAT box and set category and threat criteria (described in *Setting CAT/THREAT*).
4. Toggle checkboxes for ports ON or OFF.

- Each checkbox represents a circuit attached to the physical connection on the TADIL-B server.
- When a port is toggled ON, tracks received or transmitted on this port are filtered according to the parameters set in the EDIT window.

5. Click SAVE to save the filter or CANCEL to discard. Clicking either closes the window.

EDIT GEO FILTER Window Fields:

NAME

Name of the filter.

PRI

Priority number for the filter (from 01 to 10, with 01 being the highest priority). When using more than one filter, each filter should be assigned a different priority number.

CAT/THREAT Box

STANDARD

Specifies the standard category (Air, Nav, Subsurface, etc.) and threat (Friendly, Hostile, Unknown, etc.) combinations included in the filter.

TADIL-A/MISC

Specifies the TADIL-A/Misc categories (Emergency, Hazard, Special, etc.) included in the filter.

GEO LOCATION Box

IGNORE, BOX, CIRCLE, or SECTOR

Defines the shape of the geo filter. (Described in following sections.)

ALLOW INSIDE

Allows only those tracks within the geo filter area to be transmitted or received.

ALLOW OUTSIDE

Allows only those tracks outside of the geo filter area to be transmitted or received.

FIXED POSITION

Filter is centered on a fixed position.

OWNTRACK

Filter is centered on owntrack.

DLRP
Filter is centered on DLRP.

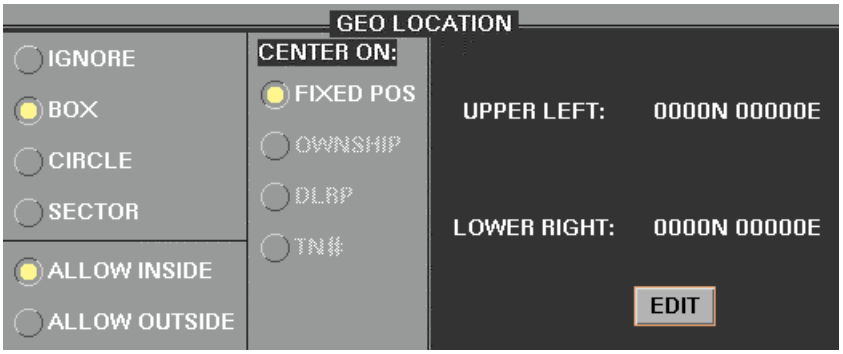
TN#
Filter is centered on a specified track.

IGNORE Radio Button

Accepts track reports for the entire world rather than filtering for a specific geographical area.

BOX Radio Button

Specifies a rectangular filter area for the track reports. An UPPER LEFT and LOWER RIGHT field and an EDIT button appear in the right portion of the GEO LOCATION box.



> To define the filter area:

1. Click EDIT to open the EDIT RECTANGLE window.
2. Enter lat/long values using one of these methods:
   - Enter lat/long values for the corners of the rectangle in the UPPER LEFT and LOWER RIGHT fields.
   - Draw a filter area directly on the tactical display.
3. To draw a rectangle:
   a. Click a point on the tactical display for the upper left corner of the rectangle.
   b. Move the pointer to the position for the lower right corner of the rectangle, and click the trackball button.

c. The lat/long values for the positions automatically fill the UPPER LEFT and LOWER RIGHT fields.

4. The AREA is automatically calculated regardless of the method used to enter lat/long values.

5. Specify whether the rectangle's lines are shown as Great Circle (GC) lines or Rhumblines (RL).

   - Great Circle line—shortest path between two points; may appear curved with some map projections.
   - Rhumbline—straight line on a Mercator projection map.

6. (Optional) Select EDGE and FILL colors for the displayed filter.

   a. Click the list box and select a color from the list.

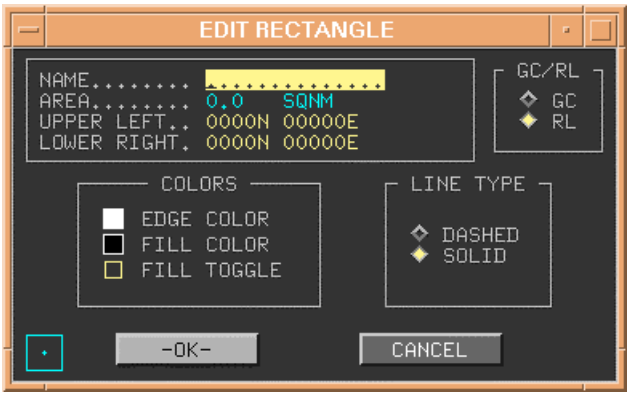
   b. Click OK in the list window to accept the color.

   c. Toggle the FILL checkbox ON or OFF.

7. (Optional) Select a line type.

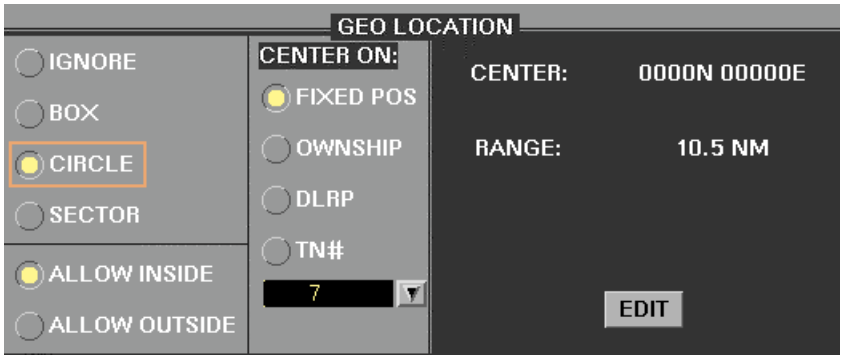
8. The NAME is automatically entered. The filter name can only be changed in the TADIL-A EDIT FILTER window.

9. Click OK to accept the settings, or click CANCEL to discard them.



CIRCLE Radio Button

Specifies a circular filter area for the track reports. CENTER and RANGE fields and an EDIT button appear in the right portion of the GEO LOCATION box.

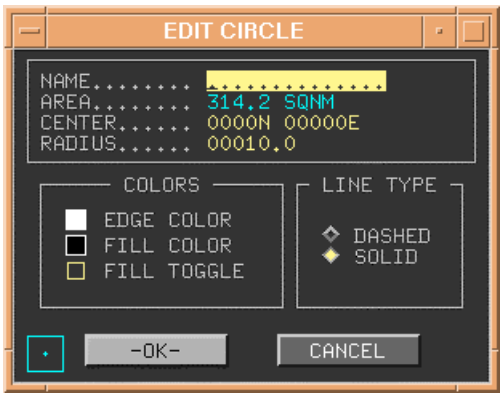


> To define the filter area:

1. Click EDIT to open the EDIT CIRCLE window.
2. Define the center and radius of the circle using one of these methods:
   - Enter values in the CENTER and RADIUS fields.
   - Draw the filter area directly on the tactical display.
3. To draw the circle:
   a. Click a point on the tactical display for the center of the circle.
   b. Move the pointer outward, creating a circle on the screen, until the circle covers the area for the filter. Click the trackball button.
   c. The lat/long value of the CENTER and the nautical miles of the RADIUS fill those fields.
   d. Optional: Use the grab points to adjust the size (radius) of the circle.
   e. Optional: Move the entire circle to a new location by clicking and holding down the left trackball button on the center point, dragging the circle to a new location, and releasing the trackball button.
4. The AREA is automatically calculated.
5. The NAME is automatically entered. The filter name can only be changed in the TADIL-A EDIT FILTER window.
6. (Optional) Select EDGE and FILL colors for the displayed filter.
   a. Click the list box and select a color from the list.
   b. Click OK in the list window to accept the color.
   c. Toggle the FILL checkbox ON or OFF.

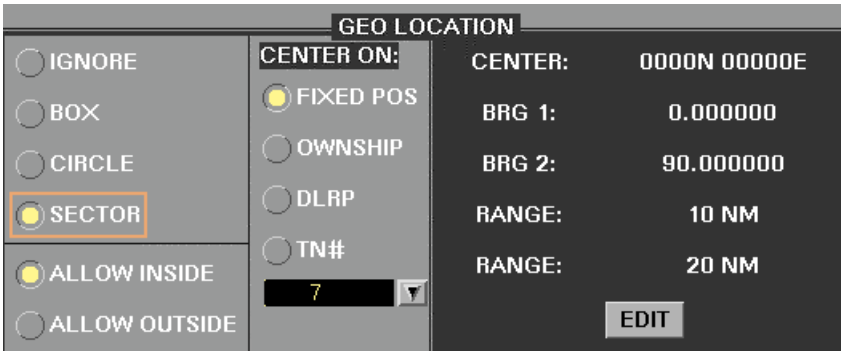
7. (Optional) Select a line type.

8. Click OK to accept the settings, or click CANCEL to discard them.



SECTOR Radio Button

Specifies a sector filter area for the track reports. CENTER, BRG 1, BRG 2, two RANGE fields and an EDIT button appear in the right portion of the GEO LOCATION box.



> To define the filter area:

1. Click EDIT to open the EDIT SECTOR window.

2. Define the center, bearings, and inner and outer range of the sector using one of these methods:

   - Enter values in the appropriate fields.
   - Draw the filter area directly on the tactical display.

3. To draw the sector:

a. Click a point on the tactical display for the center of the sector.

b. Move the pointer outward, creating a sector on the screen, until the sector covers the area for the filter. Click the trackball button.

c. The lat/long value of the center, and the bearing and range values fill those fields.

d. Optional: Use the grab points to adjust the size of the sector.

e. Optional: Move the entire sector to a new location by clicking and holding down the left trackball button on the center point, dragging the sector to a new location, and releasing the trackball button.

4. The AREA is automatically calculated.

5. The NAME is automatically entered. The filter name can only be changed in the TADIL-A EDIT FILTER window.

6. (Optional) Select EDGE color for displayed filter.

   a. Click list box and select a color from the list.

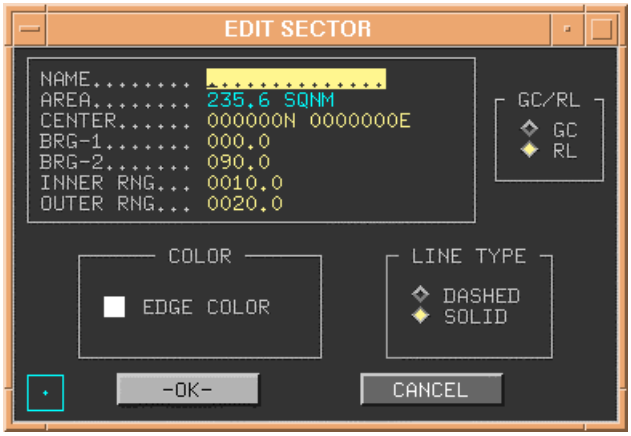
   b. Click OK in the list window to accept the color.

7. Specify whether the sector's lines are shown as Great Circle (GC) lines or Rhumblines (RL).

   - Great Circle line—shortest path between two points; may appear curved with some map projections.
   - Rhumbline—straight line on a Mercator projection map.

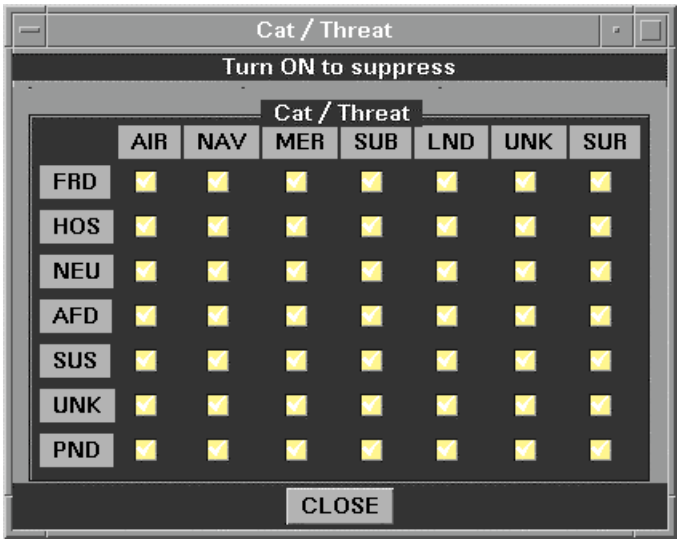
8. (Optional) Select a line type.

9. Click OK to accept the settings, or click CANCEL to discard them.

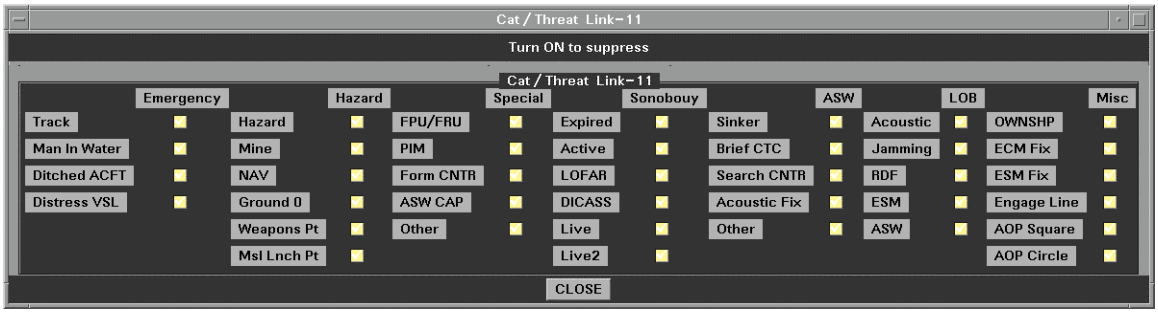


Setting CAT/THREAT

Click STANDARD in the TADIL-A EDIT FILTER window to open the CAT/THREAT window:



Click TADIL-A/MISC to open the CAT/THREAT TADIL-A window:



> How to set category and threat criteria:

1. Toggle the checkbox ON to suppress each cat/threat combination and exclude those tracks with those attributes from the system.

    a. Click a column or row label to toggle all checkboxes for that column or row. (Row labels are available only in the standard CAT/THREAT window.)

    b. For example, click the AIR label and all checkboxes in that column are toggled on. Click the label again and they are all toggled off.

c. Similarly, click a row label to toggle all checkboxes for that row.

2. Click CLOSE to accept the new settings and return to the EDIT FILTER window.

Edit a Filter

To edit the parameters for a filter, highlight the filter in the list and click EDIT to open the TADIL-A EDIT FILTER window (described in *Add a Filter*).

GEO Filter Example

This example creates a box-shaped filter area, centered on Owntrack, where *only* friendly tracks, of all types, within the defined area are received or transmitted by the system. All tracks whose positions are outside the defined area are not processed by the system.

1. Select GEO FILTER from the TADIL-A pull-down menu.
2. Click NEW FILTER to open the TADIL-A EDIT FILTER window.
3. Name the filter *Circle 1* with a priority of 01.
4. Define type and center of filter:
    a. Choose the CIRCLE radio button.
    b. Choose ALLOW INSIDE to allow only tracks inside the filter area to be processed.
    c. Choose OWNTRACK to center the filter on Owntrack.
5. Define the size and line type for the filter:
    a. Click EDIT to open the EDIT CIRCLE window.
    b. Enter 50.0 in the RADIUS field.
    c. Choose SOLID line type. Selecting an edge and fill color is optional. For this example, the color will not be changed from the default color, which is white.
    d. Click OK to accept the changes and return to the EDIT FILTER window.
6. Set the CAT/THREAT criteria:
    a. Click STANDARD to open the CAT/THREAT window.

b. Click HOS, NEU, AFD, SUS, UNK, and PND to toggle on each row. This sets the filter for only friendly tracks of all types to be received or transmitted.

c. Click CLOSE to return to the EDIT FILTER window.

7. Click SAVE to save the filter and return to the TADIL-A FILTERS window.

8. Set the filter mode:

   - Choose RECV/XMIT to apply the filter to both received and transmitted tracks.
   - Click APPLY.

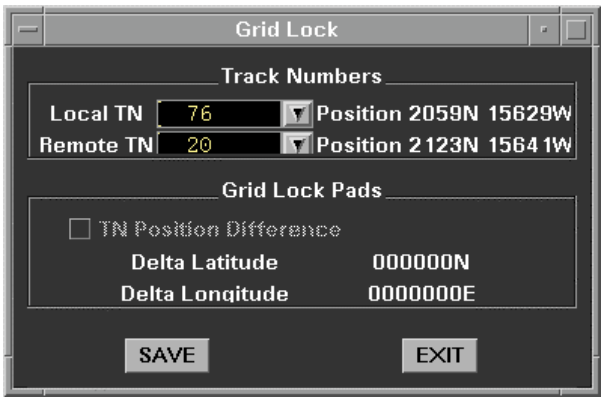
9. Select TOGGLE OVERLAY DISPLAY from the pop-up menu to display the filter area.

10. Select ACTIVATE from the pop-up menu to activate the filter.

Gridlock

Use the GRIDLOCK option to adjust differences in local and remote position reports for the same track. This ensures that local and remote reports plot the track consistently.

To access this window: TADIL-A pull-down menu **:** GRIDLOCK option.



How to Use the GRIDLOCK window:

1. Select a track from the list box in the LOCAL TN field. The position of the selected track appears in the POSITION field.

2. Select a track from the list box in the REMOTE TN field that represents the same track. The position of the selected track appears in the POSITION field.

3. Confirm the two tracks represent the same track.

4. Click SAVE to save the latitude and longitude differences shown in the GRIDLOCK PADS box. Or click EXIT to close window without saving values.

    - All remote reports for a track are adjusted by the values listed in the DELTA LATITUDE and DELTA LONGITUDE fields.

GRIDLOCK Window Actions:

> ZERO GRIDPADS (pop-up option)—sets the DELTA LATITUDE and DELTA LONGITUDE values to zero.

1. Select ZERO GRIDPADS from the pop-up menu.
2. Click SAVE.
3. Remote reports for the selected track are positioned without gridlock adjustment.

> RELOAD GRIDPADS (pop-up option)—resets the DELTA LATITUDE and DELTA LONGITUDE fields to the values that were entered when the GRIDLOCK OPTION was opened.

1. Select RELOAD GRIDPADS from the pop-up menu.
2. Click SAVE.
3. Remote reports for the selected track are adjusted by the values listed in the DELTA LATITUDE and DELTA LONGITUDE fields.

GRIDLOCK Window Fields:

TRACK NUMBERS Box

LOCAL TN

Number and position of the local track.

REMOTE TN

Number and position of the remote track.

GRID LOCK PADS Box

TN POSITION DIFFERENCE

ON—considers position differences.

Automatically toggles ON when track numbers are selected.

DELTA LATITUDE

Difference in latitude between the local and remote tracks.

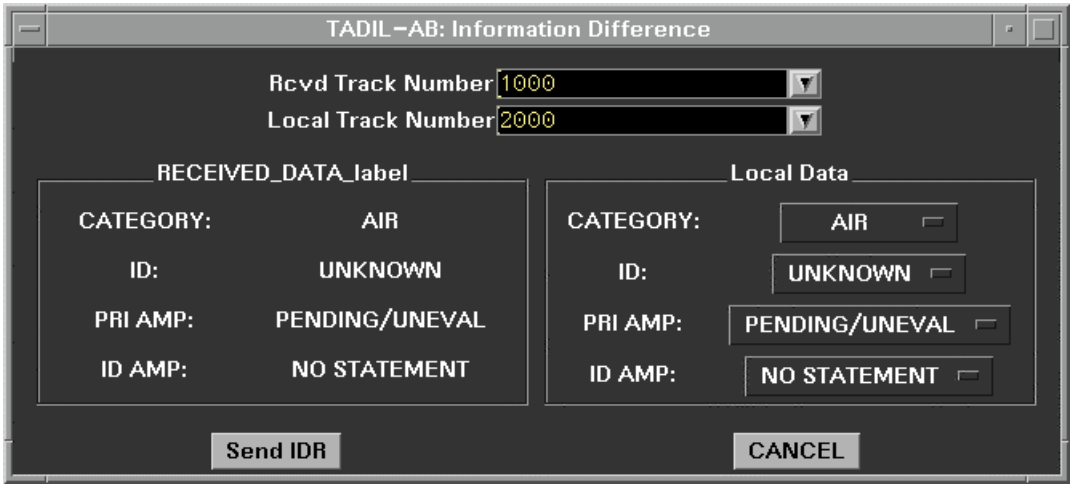
DELTA LONGITUDE

Difference in longitude between the local and remote tracks.

Information Difference

Use this option to compare two reports on the same track (one remote and one local) to see if the information matches.

To access this window: TADIL-A pull-down menu **:** INFORMATION DIFFERENCE option.



> To correct track report information:

If remote identification data for a track is different from the local identification data:

1. Determine that information from the local source and the remote source represent the same track.
2. Modify information in the LOCAL DATA box to correct data.
3. Click the SEND button to inform the remote source that the local data is correct and should replace the incorrect data for future reports.
4. Click CANCEL to close the window.

INFORMATION DIFFERENCE Window Fields:

REMOTE TRACK #

Track number assigned by remote source.

LOCAL TRACK #

Track number assigned by local source.

REMOTE DATA Box

Lists track identification data from the remote source. These fields are view-only.

CATEGORY

Track category.

ID

TADIL-A threat ID.

PRI AMP

Click on the list field to display a list of PRI AMP (Primary Amplifier) choices.

ID AMP

Further amplification of the identity of the track. Possible entries for this field are determined by the track type.

LOCAL DATA Box

Lists track identification data from the local source. These fields can be modified to show accurate information about the track.

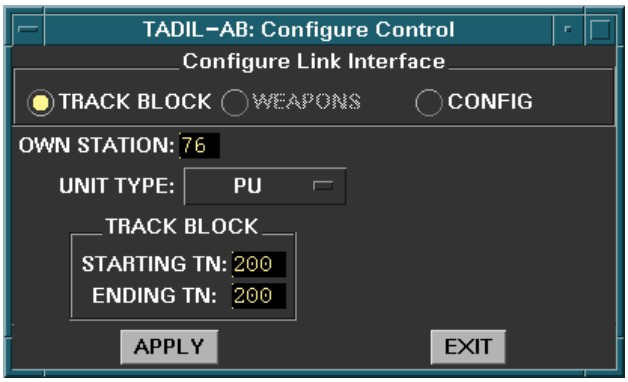
Link Configuration Control

The LINK CONFIGURATION CONTROL option is available only from the Link Supervisor machine. The operator can use this window to change Link configuration (Status, Guard lists, TADIL-B port filters), Weapon Status, and Track Block Assignments.

To access this window: TADIL-A pull-down menu **:** LINK CONFIGURATION CONTROL option.

TRACK BLOCK ASSIGNMENT

To avoid duplicate track numbers, use this window to select a block of track numbers for a specific PU to assign to tracks.



> To select a Link track block:

1. Enter data in each field to define the track block.
2. Click SAVE to accept changes or QUIT to discard. Clicking either closes the window.

LINK TRACK BLOCK ASSIGNMENT Window Fields:

OWNSTATION PU

Enter your (Ownstation) PU.

STARTING TN

First track number assigned by the system. Each additional track created is assigned a number increased by one.

If other PUs have selected the same range of numbers, track numbers for

these PUs will be assigned sequentially from this pool of numbers.

For example:

- PU30 and PU45 both select the range 3000 to 3577.

- PU30 creates a track-assigned number 3000.

- PU45 creates the next track, and it is assigned 3001.

- PU30 creates the third track, and it is assigned 3002.

ENDING TN

Ending track number in the track block assignment.

- The range of values is 200-7777.

- The recommended range is a difference of no more than 600.

TQ LIMIT

Maximum track quality value.

DEFAULT TQ

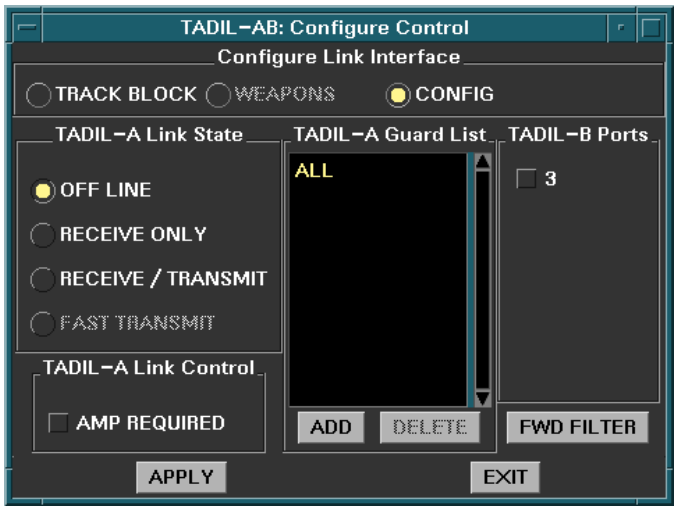
Track quality value assigned by system if a value is not specified by the user in the track report window.

REAL TIME THRESHOLD (MIN/SEC)

Value used to determine if track is a real time track. A track older than the set value is a non-realtime track.

LINK CONFIGURATION

Use this window to configure the TADIL-AB channel. The TADIL-B fields are displayed only if TADIL-B is available.



> To configure the Link:

1. Select one radio button in LINK STATE box.
2. Click AMP REQUIRED to toggle ON or OFF.
3. Set TADIL-A Guard List (described in *TADIL-A Guard List Box*).
4. Toggle checkboxes for ports ON or OFF.
   - Each checkbox represents a circuit attached to the physical connection on the TADIL-B server.
   - When a port is toggled ON, the port is activated and the status is set to READY.
5. Click FWD FILTER to configure message forwarding (described in *Forwarding Filter*).
6. Click SAVE to accept changes, or EXIT to discard. Clicking either closes the window.

LINK CONFIGURATION Window Fields:

LINK STATE Box

OFF LINE

Turn off Link transmit and receive capability.

RECEIVE ONLY

Turn on Link receive capability and turn off transmit capability.

RECEIVE/TRANSMIT

Turn on Link transmit and receive capability.

FAST TRANSMIT

Turn on Link transmit and receive capability to transmit as soon as possible rather than regular intervals.

LINK CONTROL Box

AMP REQUIRED

ON—accept only tracks that contain amplification data.

- The first received report for a track will be accepted if it contains amplification data.

- Subsequent received reports for these tracks will be accepted with or without amplification data.

OFF—accept all tracks.

XMIT DLRP

Transmit DLRP position as part of periodic reports.

TADIL-A GUARD LIST Box

The system accepts messages only from PUs designated in the Guard List. The Guard List can include all PUs, designated as "ALL", or only specific PUs.

To add a PU to the Guard List:

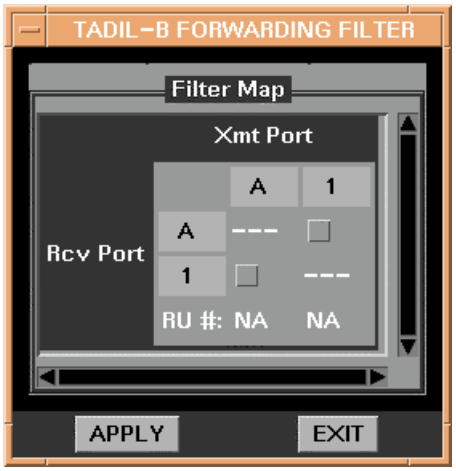
1. Click ADD.
2. Type PU numbers in the list or click the down arrow in the ADD window to display a list of PUs and select one PU from the list.
3. Click OK to add PU to the list, or click CANCEL to discard.

To delete a PU from the Guard List:

1. Highlight one PU in the list.
2. Click DELETE.
3. Click SAVE to save changes, or QUIT to discard.

Forwarding Filter

Use the FORWARDING FILTER window to establish routes for forwarding messages. Each row represents a receiving port and each column represents a transmitting port.



> To establish forwarding routes:

1. Toggle ON checkboxes where receive port and transmitting port intersect.
   - In the figure above, messages received by TADIL-A (A) are sent *only* to TADIL-B ports 1 and 2.
   - Messages received by TADIL-B port 1 are sent *only* to TADIL-A (A) and TADIL-B port 2.
   - Messages received by other ports are not forwarded.
2. Click SAVE to save the configuration.
3. Click EXIT to close the window.

WEAPONS STATUS

Use this window to enter the inventory and availability of medium and long range weapons. This information is included with any data transmitted about Owntrack.

> To set weapon status:

1. Enter data for medium and long range weapons:
   a. Enter data in COLD INVENTORY, and HOT INVENTORY.
   b. Click on the AVAILABILITY field and choose AVAILABLE or OUT OF ACTION.

2. Click SAVE to accept changes or QUIT to discard. Clicking either closes the window.

WEAPON STATUS Window Fields:

MEDIUM RANGE SURFACE TO SURFACE MISSILE Box

COLD INVENTORY

Number of weapons aboard the ship that are not ready to operate.

HOT INVENTORY

Number of weapons aboard the ship that are ready to operate.

AVAILABILITY

Availability status of weapons.

LONG RANGE SURFACE TO SURFACE MISSILE Box

COLD INVENTORY

Number of weapons aboard the ship not ready to operate.

HOT INVENTORY

Number of weapons aboard the ship ready to operate.

AVAILABILITY

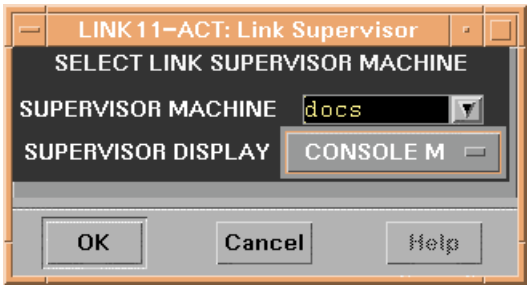
Availability status of weapons.

Link Supervisor

Use the LINK SUPERVISOR option to view or change the Link Supervisor setting. Only one machine can be designated the Link Supervisor. This is the only machine that can be used to:

- receive alerts
- define track block assignments
- define weapon status
- define Link configuration

To access this window: TADIL-A pull-down menu **:** LINK SUPERVISOR option.



How to Use the LINK SUPERVISOR Window:

1. In the SUPERVISOR MACHINE field, click the down arrow and choose a machine from the list.

2. In the SUPERVISOR DISPLAY field, click the down arrow and choose a monitor from the list.

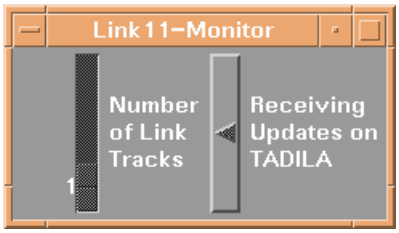
3. Click OK to save the changes, or CANCEL to discard. Clicking either closes the window.

Notes

Monitor Database Size

Use this option to display the number of Link tracks in the system.

To access this window: TADIL-A pull-down menu **:** MONITOR DATABASE SIZE option.



This window is view-only.

- A slider in the first column displays the number of Link tracks in the system relative to the total number of Link tracks allowed in the database.
- A rotating symbol in the second column indicates updates are being received on the TADIL-A channel.
- To close the window, click the window menu box in the upper left corner and choose CLOSE from the list.

Notes

New Link Track

To create a new Link track, at least one Link-11ACT channel must be running.

To access this window: TADIL-A pull-down menu **:** NEW LINK TRACK option.

> To create a new track:

1. Click on the TRACK TYPE select button and choose a track type from the list. Note: Only the track types appropriate for the selected implementation are available in the TRACK TYPE list.
2. Click OK to accept the track type or CANCEL to discard.
3. A unique track report window opens for each track type. (Described in *Track Windows*.)
4. Enter data for the track.
   - Type data, such as NICK NAME.
   - Click the select button and choose a value, such as ID.
   - Set checkboxes.
5. Save the information. (Or click CANCEL to discard it.)
   - SAVE saves the track.
   - XMIT transmits and saves the track.
6. Invalid data entered into any field appears in red when SAVE or XMIT is clicked.
   - Correct the data.
   - Click SAVE or XMIT again.
7. An alert displays if no numbers in the assigned Track Block are available.

- Contact the Link Coordinator to adjust the Link Track Block Assignment.

Track Types

The track types available depend on the implementation selected. All track types are listed and defined in this section.

ACOUSTIC BEARING

Line of bearing track for ASW systems. Reports are generated from passive sonar systems, based on sounds emitted by the track.

AIR

Track for aircraft.

AREA OF PROBABILITY

Ellipse indicating the probable area a track is located.

ASW BEARING

A line of bearing track for Anti-Submarine Warfare (ASW) systems.

ASW TACTICAL POINT

Track for specific ASW point types, including:

SINKER

BRIEF CONTACT

ASW SEARCH CENTER

SONOBUOY PATTERN CENTER

ASW STATION

CHARTED WRECK

ASW SUBSURFACE STATION

SONOBUOY REFERENCE CENTER

BOTTOMED NON-SUBMARINE

FIX

ESTIMATED POSITION (EP)

ESM

Electronic Support Message (ESM) track.

NOTACK

Friendly area of "no attack" for a specified length of time.

POINTER
Designates a track of special importance. This track transmits only once and automatically deletes after five minutes.

SONOBUOY
Track for a sonobuoy.

SPECIAL POINT
Track with special significance, used mostly for hazards, emergencies, or search and rescue.

SUBSURFACE
Track for a subsurface vessel.

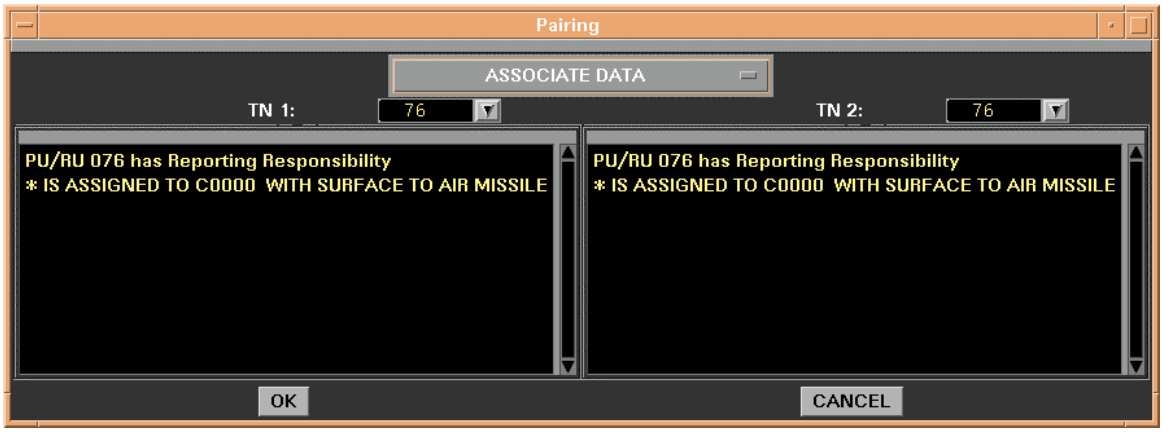
SURFACE
Track for a surface vessel.

Notes

Pair/Associate Link Tracks

Use this option to associate tracks or to terminate associations set by your system. This option will not terminate associations received from other PUs.

To access this window: TADIL-A pull-down menu **:** PAIR/ASSOCIATE LINK TRACKS option.



This window lists the following information for the selected tracks:

- PU with reporting responsibility.
- Track associations
- AOP relationships
- Controlling relationships
- Identification for this track assigned by other Link channels.

> To associate tracks or break an association:

1. Select a track number from the TN 1 list box.
2. Select a track number from the TN 2 list box.
3. Select ASSOCIATE DATA or TERMINATE PAIRING ASSOCIATION from the select button list.
4. Click OK to accept the changes or CANCEL to discard the process.
   - TN 1 is associated to TN 2, or the association is terminated.
   - A message is sent over the Link indicating the change.

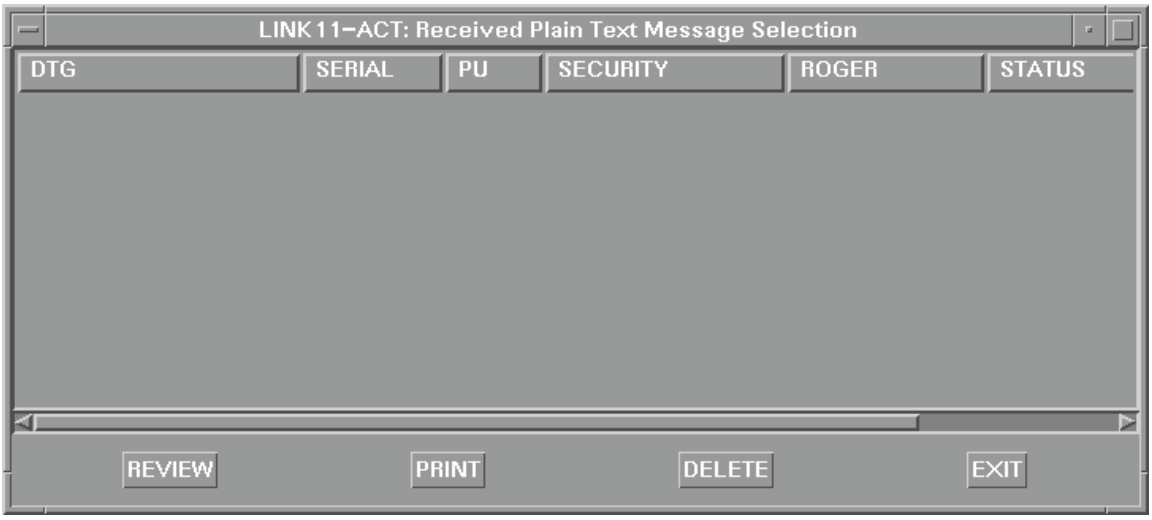
Notes

Read Plain Text

Use the READ PLAIN TEXT option to:

- view plain text messages that have been received
- create and send a new message

To access this window: TADIL-A pull-down menu **:** READ PLAIN TEXT option.



RECEIVED PLAIN TEXT MESSAGE SELECTION Window Actions:

> AUTO REFRESH ON/OFF—When toggled ON, a dot appears next to the option and the list of received messages is automatically updated.

> DELETE—delete a message.

1. Highlight one or more messages in the list.
2. Click DELETE.

> EXIT—close the window.

> NEW MESSAGE—Create a new plain text message. (Described in *Create New Plain Text Message*.)

> PRINT—selected message.

> REVIEW—View message. (Described in *View Plain Text Messages*.)> SET AUTO REFRESH TIME—Set the interval, in minutes or seconds, at which the list automatically updates.

RECEIVED PLAIN TEXT MESSAGE SELECTION Window Fields:

DTG
Time message was received.

SERIAL
Message number generated by the system to identify the message.

PU
PU number that sent the message.

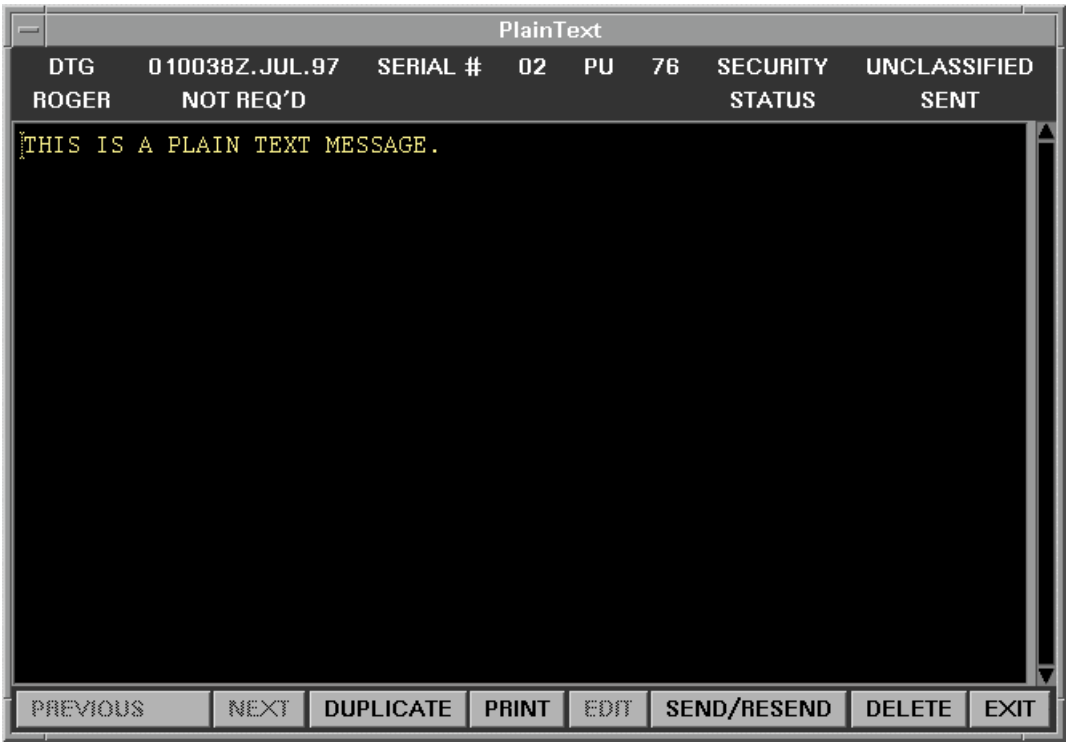
SECURITY
Security level of the message.

ROGER
Indicates whether a roger is required for the message.

STATUS
Received and rogered status. If a roger is not required, this column displays RECEIVED. If a roger is required, this column displays whether the message was rogered or not.

View Plain Text Messages

To view a plain text message, select one or more messages in the RECEIVED PLAIN TEXT MESSAGE SELECTION window, and click REVIEW to open the PLAIN TEXT MESSAGE window.



The PLAIN TEXT MESSAGE window displays identification information and text for the selected message.

PLAIN TEXT MESSAGE Window Actions:

> DELETE—the message.

> DUPLICATE—create a duplicate copy of the message.

1. Click DUPLICATE to open new PLAIN TEXT MESSAGE window containing the duplicate message.
2. Make changes to the message, if needed.
3. Click SEND/RESEND to transmit the message, or click SAVE to save the message without transmitting.

> EXIT—close the window and return to the RECEIVED PLAIN TEXT MESSAGE SELECTION window.

> NEXT—view next message (if more than one message was selected).

> PREVIOUS—view previous message (if more than one message was selected).

> PRINT—the message.

> REPLY—send a reply to the message.

1. Click REPLY to open new PLAIN TEXT MESSAGE window.
2. Enter a reply in the text field.
3. Click SEND/RESEND to transmit, or click SAVE to save the message without transmitting.

> REQUEST RE-XMIT—request a retransmission of the message (if the message appears garbled or is missing data).

> ROGER—send a roger, if required.

PLAIN TEXT MESSAGE Window Fields:

DTG
Date-time group of the message.

ROGER
Indicates whether a roger is required.

SERIAL
Message number assigned by the system.

PU
Number of the participating unit that transmitted the message.

SECURITY
Classification of the message.

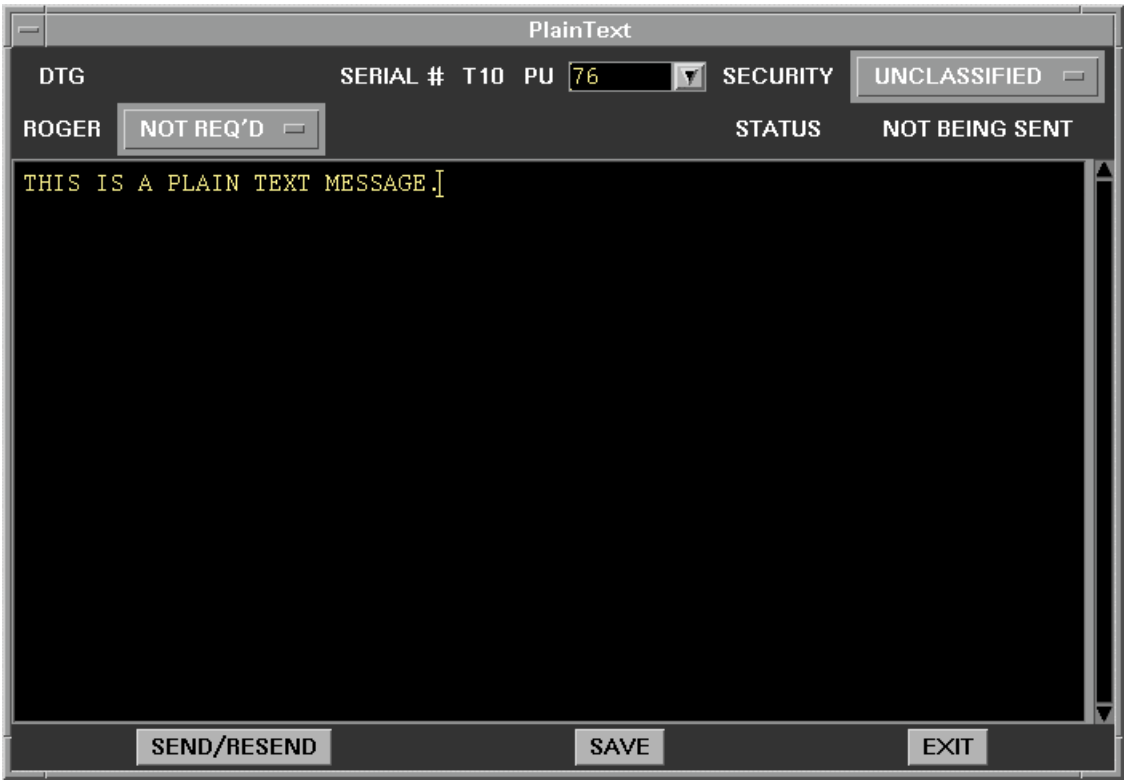
STATUS
Status of the message.

Create New Plain Text Message

To create a new plain text message, open the PLAIN TEXT MESSAGE window one of two ways:

- Select NEW MESSAGE from the RECEIVED PLAIN TEXT MESSAGE SELECTION window pop-up menu.

- Click REPLY when viewing a message.



> To create a new plain test message:

1. Enter text in the scroll box.
2. Click the down arrow next to the PU field and select the PU to receive the message.
3. Click the SECURITY select button and choose a classification for the message.
4. Click the ROGER select button and specify if a roger is required.
5. Click SEND/RESEND to send the message or SAVE to save the message without transmitting.
6. Click EXIT to close the window.

PLAIN TEXT MESSAGE Window Fields:

DTG

Date-time group of the message. This value is automatically entered when SEND/RESEND is clicked.

ROGER
Indicates whether a roger is required for the message.

SERIAL
Message number assigned by the system.

PU
Number of the participating unit transmitting the message.

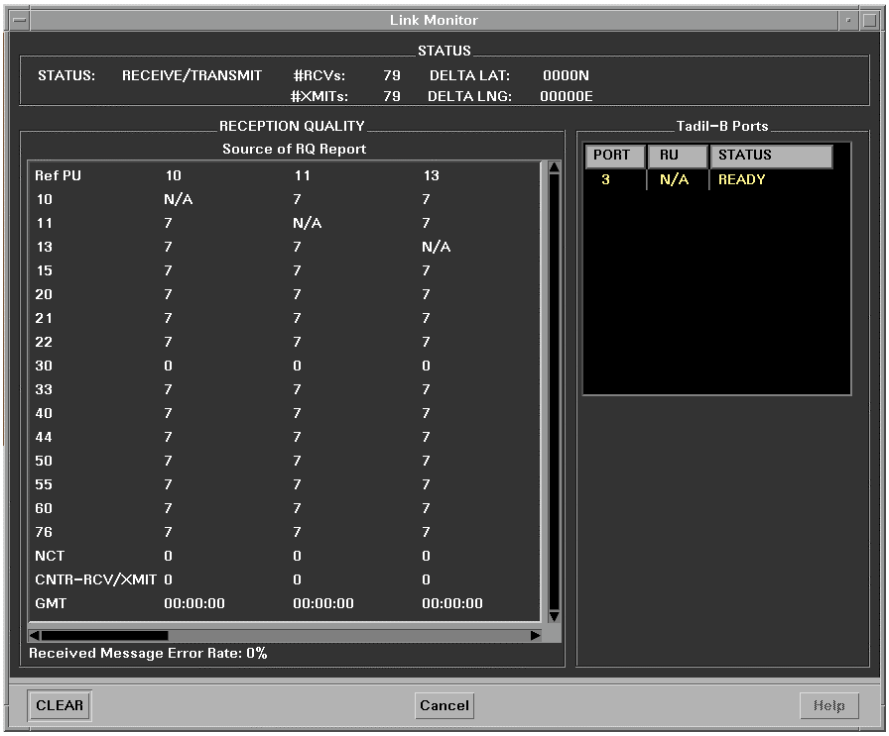
SECURITY
Classification of the message.

STATUS
Status of the message.

Receive Quality

Use this option to view the status of the transmission quality for all PUs. The TADIL-B PORTS box is added to the RECEIVE QUALITY window to view the status of the TADIL-B ports only if TADIL-B is active.

To access this window: TADIL-A pull-down menu **:** RECEIVE QUALITY option.



About the RECEIVE QUALITY window:

- This window is view-only and cannot be edited.
- The information automatically updates every five seconds.

RECEIVE QUALITY Window Actions:

> Click CLEAR to reset values to zero.

> Click CANCEL to close the window.

RECEIVE QUALITY Window Fields:

STATUS Box

STATUS

Displays the current receive/transmit status of the system (set from the LINK STATUS option). Values include OFF LINE, RECEIVE ONLY, RECEIVE/TRANSMIT, or FAST TRANSMIT.

#PTRs

Displays the number of Prepare To Receive (PTR) messages received since CLEAR was last clicked. If this number continues to increase, the system is receiving properly.

#PTTs

Displays the number of Prepare To Transmit (PTT) messages sent since CLEAR was last clicked. If this number continues to increase, the system is transmitting properly.

DELTA LAT AND DELTA LNG

Current gridlock pad position.

RECEPTION QUALITY Box

The Reception Quality box displays a matrix of PUs and the status of transmitted and received quality values for all PUs.

- Each column represents a receiving PU.
- Each row represents a transmitting PU.
- The point where each row and column intersect, displays a number indicating the receive quality between the two PUs.
    - Reception quality is displayed as a number from 0 to 7, with 7 representing the best quality and 0 representing a PU that has gone inactive.
    - If a column is blank, that PU is not reporting receive quality.

For example, in the figure above:

- PU30 is not reporting receive quality—the column is blank.
- The receive quality from PU76 to all other PUs is 4, indicating PU76 has a possible transmission problem.
- The receive quality for PU50 is 3, indicating that PU50 has a possible reception problem.
- The receive quality between PU76 and PU50 is 2, resulting from their respective transmission and reception problems.

NCT (Net Cycle Time)
Displays the time (in seconds) between PTT messages reported by each PU.

COUNTER
Displays the most current serial number transmitted by the PU.

GMT (Greenwich Mean Time)
Displays the current system time being reported by each PU.

RECEIVED MESSAGE ERROR RATE
Percentage of messages received by Owntrack containing errors. This figure is based on all messages received from all PUs.

TADIL-B PORTS Box

PORT
Port physically connected to TADIL-B server.

RU
Address of the reporting unit connected on the port.

STATUS
Status of the port.

OFFLINE—port is deactivated.

READY—port is activated, but there is no unit at the other end of the circuit.

ACTIVE—port is activated and a unit is at the other end of the circuit, but the connection is not complete.

OPERATIONAL—port is activated and connection is complete. Track data and other information can be transferred only on an OPERATIONAL port. If no messages are received from the connected system for one minute, the status returns to READY.

Notes

Search Link Tracks

Use the SEARCH LINK TRACKS option to search the track database for a particular Link track or tracks that meet specified search criteria.

1. Select SEARCH LINK TRACKS to open the DATABASE SEARCH window.

    - This window operates the same as the DATABASE SEARCH window.
    - The DATABASE SEARCH window is described in the SEARCH section of the *Software User's Manual, Unified Build (TMS/UCP)* .

2. Tracks which meet the search criteria are highlighted on the display.

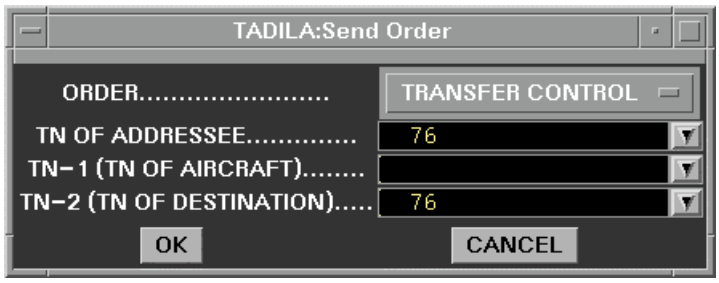
3. Click EXIT to close the window.

Notes

Send Aircraft Control Order

Use this option to send an order to transfer control of an aircraft, or to indicate the aircraft is to return to base.

To access this window: TADIL-A pull-down menu **:** SEND AIRCRAFT CONTROL ORDER option.



> To send an Aircraft Control Order:

1. Select order to send.
2. Click down arrow and select track numbers of addresee, aircraft, and destination.
3. Click OK to send, or CANCEL to discard.

SEND ORDER Window Fields:

ORDER
Either TRANSFER CONTROL or RETURN TO BASE.

TN OF ADDRESSEE
Track with control of aircraft.

TN1
Track number of aircraft.

TN2
Unit requested to assume control, or home base of aircraft.

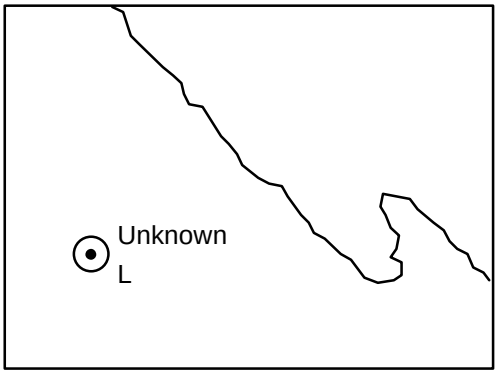
Notes

Stop Xmit

Use the STOP XMIT option to stop transmitting reports to the Link.

> To stop transmitting reports on the Link:

1. Select a track or group of tracks from the tactical display.
   - To search for particular tracks, select XMIT ON LINK with no tracks highlighted. This opens the SEARCH LINK TRACKS window.
2. Select STOP XMIT from the TADIL-A pull-down menu.
3. The letter L appears to the lower right of the track on the tactical display, as shown in this figure.

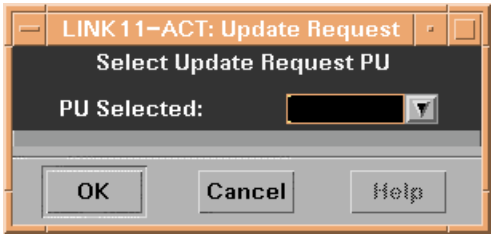


Notes

Update Request

Use this option to request the most recent track reports from a particular PU.

Select UPDATE REQUEST from the TADIL-A pull-down menu to open the UPDATE REQUEST window.



> To request track report updates:

1. Click the list box to display a list of all available PUs.
2. Choose one PU from the list.
3. Click OK to send the request, or CANCEL to close the window without sending the request.

Notes

Xmit DLRP

The DLRP position is transmitted periodically if XMIT DLRP is checked in the LINK CONFIGURATION window. Use XMIT DLRP to immediately transmit the position of the DLRP without waiting for the next regular transmission. The periodic transmission interval is not changed.

> To transmit DLRP position:

1. Choose XMIT DLRP from the TADIL-A menu.

2. If more that one Link channel is active, a window will open to choose which DLRP to transmit. Select one and click OK.

3. Click TRANSMIT in the TRANSMIT DLRP window to immediately transmit the DLRP position, or click CANCEL to discard the process.

Notes

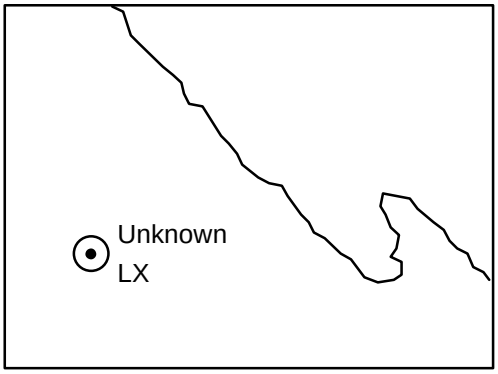
Xmit on Link

Use this option to automatically transmit reports to the Link at regular intervals set by the system. Tracks with a timelate greater than 23:59 will not be transmitted.

> To transmit reports on the Link:

1. Highlight a track or group of tracks from the tactical display.
   - To search for particular tracks, select XMIT ON LINK with no tracks highlighted to open the SEARCH LINK TRACKS window.
2. Select XMIT ON LINK from the TADIL-A pull-down menu.
3. The letters LX appear to the lower right of the track on the tactical display. (LR appears for a received track; LN for a non-real time received track.)

Note: Clicking XMIT from the NEW TRACK, EDIT, or SEARCH options will also begin this automatic transmit process.



Notes

Programmed Operational Functional Appraisal (POFA)

POFA is a hardware diagnostic tool that tests the NTDS data path by sending a known pattern of words through the Data Terminal Set (DTS) communications circuit and checking the pattern for errors.

- In the single-station mode, the test data is sent through the DTS and back to Ownstation.
- In multi-station mode, the test data is transmitted to and received from other participating stations.

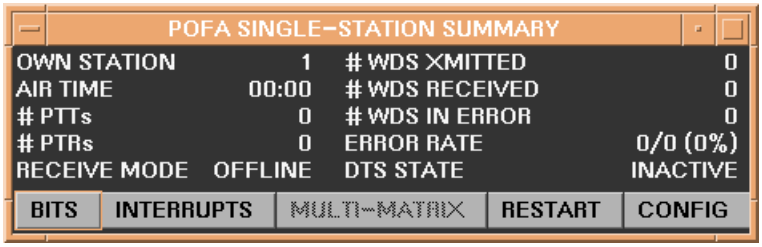
Notes

POFA Single- or Multi- Station Summary Window

The POFA Single- or Multi- Station Summary window monitors status and data flow on the POFA interface.

- More than one channel (each using a different interface) may be assigned to a device. Only one channel may be ON for each device.
- This window contains information only after it is configured. (Described in *Configure*.)
- All fields in this window are view-only.

Highlight the POFA interface in the COMMUNICATIONS window and choose START from the pop-up menu to open the POFA SUMMARY window.



This window provides a summary of POFA data and also provides access to additional information. The window title will be POFA SINGLE-STATION SUMMARY or POFA MULTI-STATION SUMMARY depending on the mode set in the CONFIGURATION window. (Described in *Configure*.) The window remains open until the channel is stopped.

POFA SUMMARY Window Actions:

> BITS—view parity status and bit information for reception from a given station. (Described in *Bit Display*,)

> CLEAR DATA (pop-up option)—Set values to zero.

> CONFIG—the POFA and RECEIVE modes. (Described in *Configure*.)

> INTERRUPTS—view interrupt codes and error counts. (Described in *Interrupt Codes*.)

> MULTI-MATRIX—view error rates between reporting stations. (Described in *Multi-Station Mode*.)

> SIMULATE DTS RESET (pop-up option)—toggles DTS state from INACTIVE to ACTIVE.

> RESTART—clear all previously collected data from the POFA SUMMARY window and reset all parameters to default values. New summary data will immediately begin to accumulate.

POFA SUMMARY Window Fields:

OWNSTATION

The number which identifies Ownstation. The default number (1) appears the first time POFA is turned on. Subsequently, this field displays the last number assigned to Ownstation.

AIR TIME

Total time the channel has transmitted.

 # PTTs

Total number of *Prepare to Transmit* messages from the Data Terminal Set (DTS) when data transmission is expected.

 # PTRs

Total number of *Prepare to Receive* messages from the DTS when data is about to be received.

RECEIVE MODE

The receive mode set in the POFA CONFIGURATION window—OFFLINE, RECV ONLY, or RECV/XMIT.

 # WRDS XMITTED

Total number of words transmitted.

 # WRDS RECEIVED

Total number of words received.

 # WRDS IN ERROR

Total number of words which contain errors in the established pattern.

ERROR RATE

The ratio of words in error to total words received.

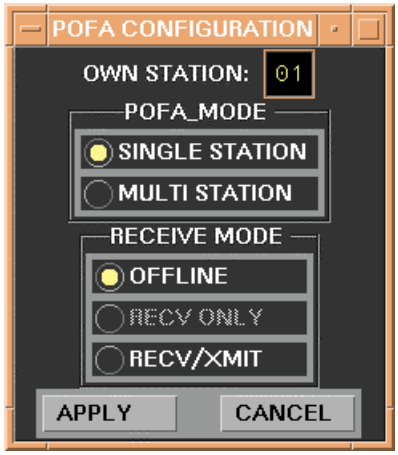
DTS STATE

Data Terminal Set (DTS) status is shown as ACTIVE, INACTIVE, or TIMEOUT.

Configure

The POFA MODE and RECEIVE MODE must be set in the POFA CONFIGURATION window before data will be available in the SUMMARY window.

Click CONFIGURE in the SUMMARY window to open the POFA CONFIGURATION window.



> To configure POFA:

1. Enter Ownstation identification number.
   - The default identification number for Ownstation is 1.
   - The number is set by the Area Link Coordinator.
2. Set POFA mode. POFA mode can *only* be changed when the RECEIVE mode is OFFLINE. If necessary:
   a. Change RECEIVE mode to OFFLINE.
   b. Click APPLY (window will close).
   c. Re-open window and set POFA mode.
3. Set RECEIVE MODE.
4. Click APPLY to accept the changes or CANCEL to discard.

POFA CONFIGURATION Window Fields:

OWNSTATION
Ownstation identification number.

POFA MODE

SINGLE STATION sends test data through the DTS and back to Ownstation.

MULTI-STATION transmits to and receives test data from other participating units.

RECEIVE MODE

OFFLINE is the default value for the RECEIVE MODE.

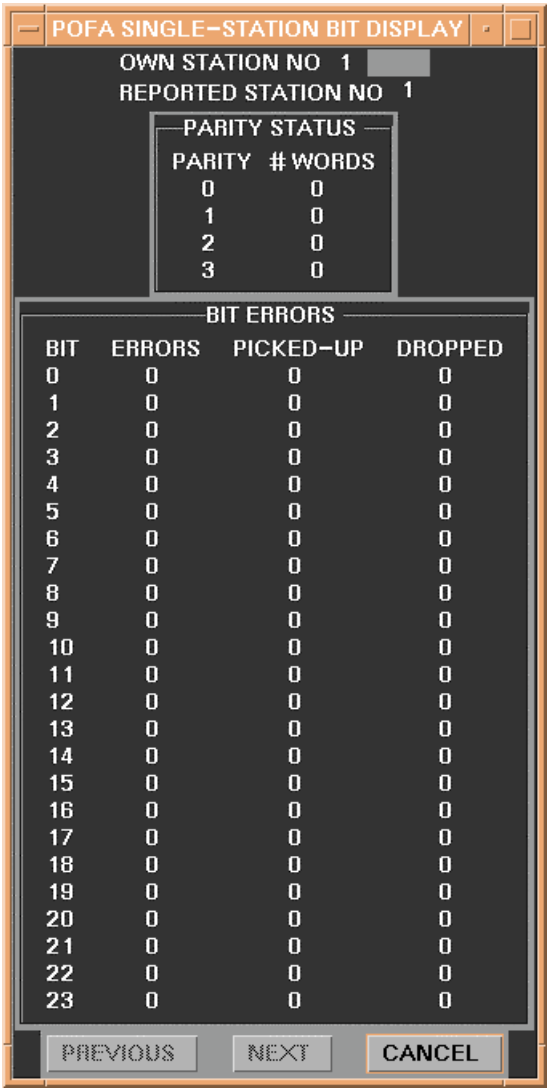
In single-station mode, RECV/XMIT must be used to both transmit and receive the test data.

In multi-station mode, use RECV ONLY to only receive test data. Use RECV/XMIT to both receive and transmit test data.

Bit Display

Use this button to view parity status and bit information for reception from a given station.

Click BIT DISPLAY from the POFA SUMMARY window to open the POFA BIT DISPLAY window.



This window is not active until modes are set in the POFA CONFIGURATION window. All fields are view-only.

How to Use the BIT DISPLAY Window:

1. Use PREV and NEXT to view the status of other reporting stations. These are inactive in single-station mode.

2. Click CANCEL to close the window.

BIT DISPLAY Window Fields:

OWNSTATION

Ownstation number.

REPORTED STATION

In single-station mode, this number is Ownstation number. In multi-station mode, the lowest numbered reporting station is displayed when the window opens.

PARITY STATUS

Number of test pattern words received with parity status 0, 1, 2, or 3.

BIT ERRORS

The BIT ERRORS box contains four columns:

BIT—lists 24 bits, 0-23.

ERRORS—sum of picked-up errors and dropped errors for each bit.

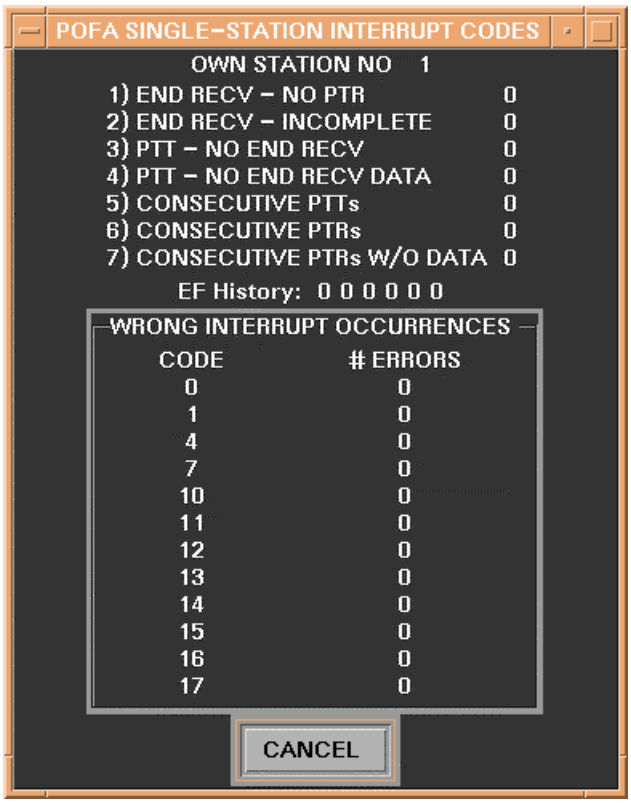
PICKED-UP—total picked-up errors for each bit.

DROPPED—total dropped errors for each bit.

Interrupt Codes

Use this button to view interrupt codes and error counts. Wrong interrupt codes indicate either a malfunction in the system or an older model DTS. Although an older DTS will indicate errors in the WRONG INTERRUPT OCCURRENCES list, these codes are handled correctly by the system.

Click INTERRUPT CODES to open the POFA INTERRUPT CODES window.



This window is not active until modes are set in the POFA CONFIGURATION window. All fields are view-only.

About the POFA INTERRUPT CODES Window:

The POFA INTERRUPT CODES window contains:

- A list of conditions (1-17) in which interrupt codes were received.
- Invalid interrupt codes (0,1,4,7 and 10-17) and the number of occurrences for each code.
- Last six External Functions (EF) received from DTS, such as PTTs and PTRs.

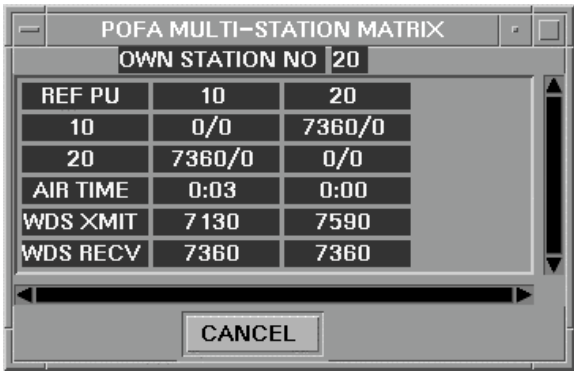
Click CANCEL to close the window.

Multi-Station Matrix

If POFA is in single-station mode, the MULTI-MATRIX button will be inactive in the SINGLE-STATION SUMMARY window. All buttons will be active in the MULTI-STATION SUMMARY window.

Use this button to view error rates between reporting stations.

Click MULTI-STATION MATRIX from the POFA SUMMARY window to open the POFA MULTI-STATION MATRIX window.



This window is not active until modes are set in the POFA CONFIGURATION window. The fields are view-only. Click CANCEL to close window.

POFA MULTI-STATION MATRIX Window Fields:

OWNSTATION

Number of Ownstation.

REF PU

Reference number of each participating unit (PU).

- The PU numbers listed across the top of the box are the stations that report directly to Ownstation.

- The PU numbers listed in a column directly below "REF PU" are all reporting stations participating in the test. These stations report directly to Ownstation or to another station in the area which is reporting directly to Ownstation.

- The PU numbers are listed in numerically ascending order.

- For each PU combination, the matrix displays the ratio of total words received to the number of errors.

AIR TIME

Total time the reporting station has been transmitting in a multi-station test.

WRDS XMIT

Total words transmitted by the station.

WRDS RECV

Total words received by the station.

Appendix A: Acronyms

ADP	Automatic Data Processing
ALT	Altitude
AMP	Amplification
AMP CHAR	Amplifying Characteristics
AOP	Area of Probability
AOU	Area of Uncertainty
ACQSTN	Acquisition
ASW	Anti-Submarine Warfare
ATDL1	Army tactical data link 1
BBOX	Bearing Box
BRG	Bearing
CANTCO	Can’t Comply
CANTPRO	Can’t Process
CAT/THREAT	Category and Threat
CASS	Command Active Sonobuoy System
COMCNT	Commencement
COMMS	Communications
CONV	Conventional
CSE	Course
CTSX	Central Track Store Index
DI	Discrete Identifier
DICASS	Directional Command Active Sonobuoy System
DIFAR	Directional Finding and Ranging
DLRP	Data Link Reference Point

DR TYPE	Data Report Type
DTG	Date-time Group
DTS	Data Terminal Set
ECM	Electronic Control Message
EF	External Functions
EP	Estimated Position
ESM	Electronic Support Message
EST	Established
FTN	FOTC Track Number
GC	Great Circle
GEO	Geographic
GMT	Greenwich Mean Time
H-WDTH	Half-width
ID	Identification
ID AMP	Identity Amplifier
IFF	Identification Friend or Foe
INV	Inventory
JRSL	Jammer received signal level
JTN	TADIL-J Track Number
LAT/LONG	Latitude and Longitude
LOFAR	Low-Frequency Acquisition and Ranging
LLLTV	Low-Light-Level Television
MAD	Magnetic Anomaly Detection
NAV	Naval
NCT	Net Cycle Time
LTN	Local Track Number
NRT	Non-real Time
NTDS	Naval Tactical Data System; Naval Tactical Display System

NU-TRK	New Track
OBSRVTN	Observation
ORIG	Origin
PIF	Pseudo Identification Feature ; Personal Identification Feature
POFA	Programmed Operational Functional Appraisal
PRF	Pulse Repetition Frequency
PRI AMP	Primary Amplifier
PT AMPLIFY	Point Amplify
PT TYPE	Point Type
PTR	Prepare To Receive
PTT	Prepare To Transmit
PU	Participating Unit
PU/RU	Participating Unit or Reporting Unit
RECV	Receive
REF	Reference
RE-XMIT	Retransmit
RL	Rhumbline
RNG	Range
SMJR	Semi-major (axis)
SMNR	Semi-minor (axis)
SPCL	Special
SPD	Speed
SPI	Special Processing Indicator
SPP	Sound Propagation Path
SRC FREQ	Source Frequency
SSN	Nuclear Submarine
STN	System Track Number
TADIL	Tactical Data Link; Tactical Digital Information Link

TN	Track Number
TQ	Track Quality
TRK	Track
UB	Unified Build
UID	Unique Identifier
USMC	United States Marine Corps
WILCO	Will Comply
XMIT	Transmit
XREF	Cross-reference